4.12 Common Services Tools

This section describes the tools used by DAAC operators on a day-to-day basis:

1. Common Desktop Environment (CDE) Tool
2. Microsoft Office Professional
3. Netscape Communicator
4. iPlanet Web Server
5. EOSView
6. Aster On-Demand Product Request Form (ODFRM)
7. Subscription Server
8. Batch Insert Utility
9. Data Pool Cleanup Utility
10. Update Granule
11. Data Pool Access Statistics Utility (DPASU) – Rollup Scripts
12. Data Pool Access Statistics Utility (DPASU) – Maintenance Scripts

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4.12.1 Common Desktop Environment (CDE) Tool

The ECS uses the Common Desktop Environment (CDE) Tool COTS package to manage X windows. It is a commercial graphical user interface for UNIX supporting AIX, Digital UNIX and Solaris operating systems. It provides users registered at an ECS site with generalized support for performing the basic operations listed in Table 4.12.1-1.

Table 4.12.1-1. Common ECS Operator Functions Performed with CDE

Operating Function	GUI	Description	When and Why to Use
Start a desktop session	Basic login with userid and password	Invokes the CDE window manager.	Access an ECS host.
Use the Front Panel	Front Panel window	Contains set of controls for performing common tasks (i.e., calendar, email, clock, print, file management).	As needed during work session.
Manage files	File Manager	File management tool.	Perform file navigation/manipulation.
Use Application Manager	Application Manager	How to run applications using Application Manager, the main repository for applications in CDE.	Need to invoke applications.
Customize the desktop environment	Style Manager	Allow for customizing the look and behavior of desktop.	Need to customize desktop environment.
Use text editor	Text Editor	Supports creation/editting of short documents (e.g., memos, mail, resource files).	Need to create short documents.
Use mailer	Mailer	Allows for sending/receiving email messages.	Need to access email.
Print	Printing	Explains how to access printers.	Need to print/change default printer.
Use Terminal	Terminal	Explains how to display and customize terminal emulator windows on desktop.	Need to access control terminal window.
Use Icon editor	Icon Editor	Creates files for use as desktop icons or backdrops.	Need to create icons/ backdrops.
Use Image Viewer	Image Viewer	Allows for capture, viewing, editing, printing, and translation of monochrome/ color image files.	Need to perform image manipulation.
Use Address Manager	Address Manager	How to find cards on users, hosts, and systems to perform operations on them.	Need to access/manipulate info on users, hosts, systems.

4.12.1.1 Quick Start Using the Common Desktop Environment (CDE) Tool

After being registered as an ECS user by the site administrator, the user accesses the CDE window manager by logging into an ECS host using a defined UserID and password.

4.12.1.2 CDE Main Screen

Figure 4.12.1-1 presents an example of the type of support provided by the CDE window manager.

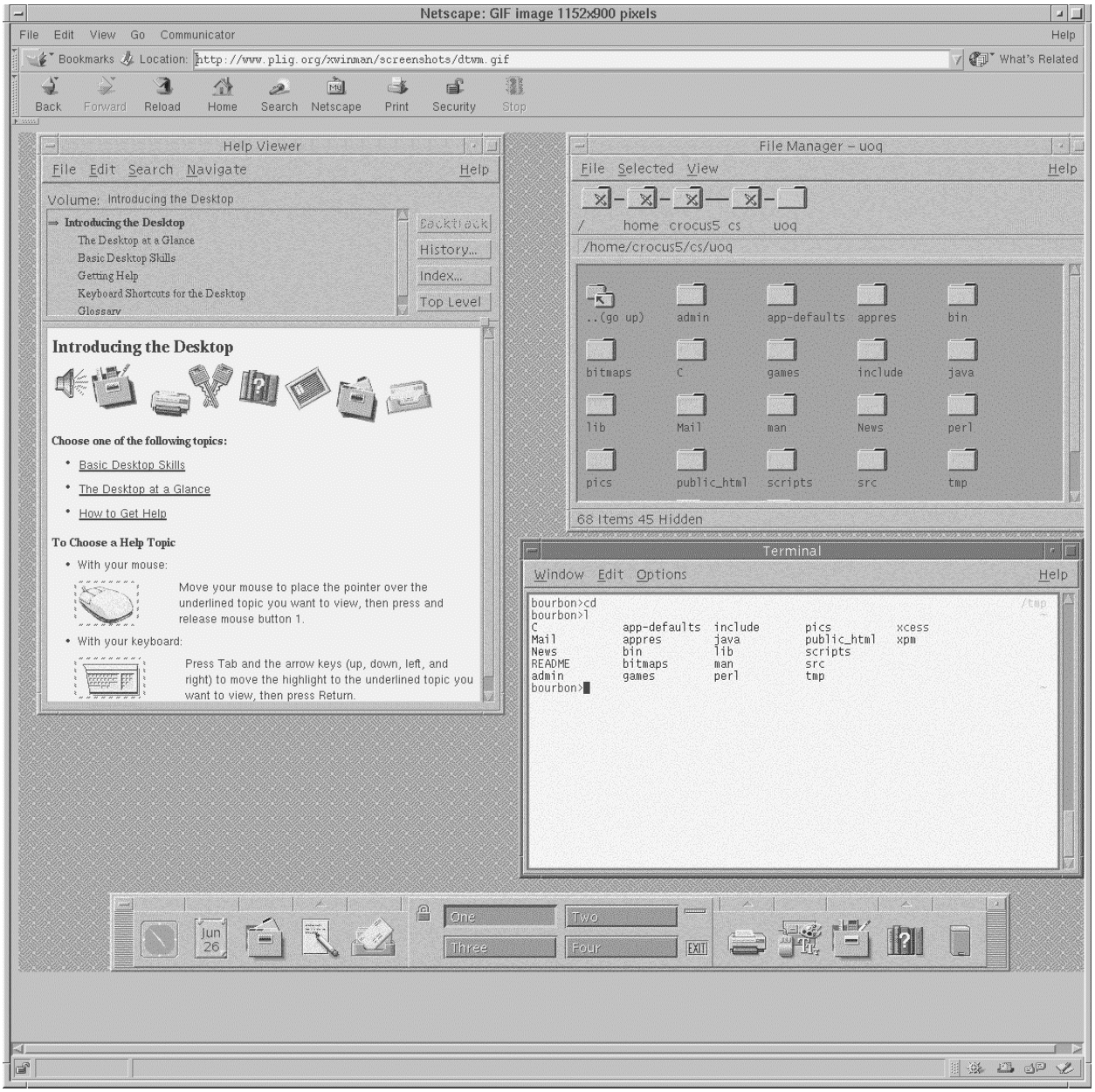

Figure 4.12.1-1. Example of CDE Window Manager Support Features

The Front Panel window at the lower part of the screen contains a set of icons allowing access to common support features. Through this panel the user can obtain time, date, monitor schedule, access email, edit text files, print, access file manager to navigate the file system, and application manager to invoke and manage custom applications.

The Help Viewer window to the left of the screen is a support feature the user can invoke to obtain detailed online explanation of CDE support capabilities.

The File Manager window at the upper right of the screen supports navigating the file system and creating, deleting, and moving file objects.

The Terminal window below the File Manager on the screen allows Unix command line access to operating system services.

In addition to the help accessible to the online user, detailed documentation of CDE capabilities from the user standpoint and the system administrator are available from the Sun vendor at the web location:

http://docs.sun.com/ab2/coll.8.40/@Ab2CollToc.

4.12.1.3 Required Operating Environment

Refer to the Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide available at the Sun vendor's documentation link.

4.12.1.4 Databases

Not applicable.

4.12.1.5 Special Constraints

Access to CDE is available only to registered users of ECS sites.

4.12.1.6 Outputs

The Common Desktop only outputs event and error messages.

4.12.1.7 Event and Error Messages

CDE issues both status and error messages to the operator screen. Error messages are listed in the CDE support documentation accessible at the web link:

http://docs.sun.com/ab2/coll.8.40/@Ab2CollToc.

4.12.1.8 Reports

None.

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4.12.2 Microsoft Office Professional

ECS provides Microsoft Office Professional to the DAACs to support general office automation tasks. Table 4.12.2-1 lists the operational tasks supported in the Office Professional package.

Table 4.12.2-1. Common ECS Operator Functions Performed with Microsoft Office

Operating Function	GUI Program	Description	When and Why to Use
Word processing	Microsoft Word	Allows operator to create, edit, open, save, and print documents. Allows incorporation of material generated in Excel and PowerPoint.	To create and maintain DAAC policies and procedures.
Develop a spreadsheet	Microsoft Excel	Allows operator to manage, format, chart and analyze data imported from the MSS database.	Imports data from the MSS database to create a report on an as needed basis.
Develop a presentation	PowerPoint	Allows operator to produce presentation slides, drawings, handouts, speaker notes, outlines and graphs. Allows incorporation of material generated in Excel and Word.	To develop briefings on an as needed basis.
Develop a database	Microsoft Access	Allows operator to define, create, and maintain databases. Allows operator to query database information and generate reports.	Provides support for as-needed database querying and reporting Allows export of data to Word and Excel for analysis.

4.12.2.1 Quick Start Using Microsoft Office Professional

Microsoft's Program Manager contains the Microsoft Office Professional icon, which can be selected to provide Excel, Word, PowerPoint, and Access icons that launch the applications. Refer to the following Microsoft documentation for more details about its applications:

Microsoft Word User's Guide
Microsoft Excel User's Guide
Microsoft PowerPoint User's Guide
Microsoft Access User's Guide

The documentation of Microsoft Office Professional used as a basis and referenced in this section, is for use with the Windows 2000 operating system.

Microsoft Office Professional is installed exclusively on PCs.

4.12.2.2 Invoking Microsoft Office Professional

On a PC running Windows 2000, the Microsoft Office Professional products can be invoked from the Office toolbar (if present) or the "Start" menu on the desktop display.

4.12.2.3 Required Operating Environment

For all COTS packages, appropriate information on operating environments, tunable parameters, environment variables, and a list of vendor documentation can be found in a configuration management controlled document for each product. To find the documentation for Office Professional refer to the ECS Baseline Information System web page, URL http://cmdm.east.hitc.com/.

4.12.2.3.1 Interfaces and Data Types

The Microsoft Office Professional applications Word, Excel, PowerPoint, and Access work alike and interface with each other as if each were a single program.

4.12.2.4 Databases

The individual Microsoft Office products maintain their "products" in proprietary file structures:

MS Word = **.doc**
MS EXCEL = **.xls**
MS PowerPoint = **.ppt**
MS Access = **.mdb**

Each release of these products can accept output from previous releases of the same product, and generally, their competitor's products available at the time of their release. However, they may not be able to use the same file extension name structures created by a later release. See the Special Constraints Section 4.12.2.5 below.

4.12.2.5 Special Constraints

The version of Microsoft Office Professional installed is Office 2000 for Windows 2000. Users must take care when importing files (.doc, .xls, .ppt, and .mdb) and ensure the files are not produced by a later version of these products.

4.12.2.6 Outputs

The Microsoft Office Professional products display their outputs on screen and produce printed output appropriate to the product.

4.12.2.7 Event and Error Messages

Microsoft Office Professional provides help windows to identify and explain any Microsoft Office error messages.

4.12.2.8 Reports

Refer to the associated Microsoft User Guide for detailed information on the generation of reports using Word, Excel, PowerPoint, and Access.

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4.12.3 Netscape Communicator

Netscape Communicator is a GUI interface for browsing the World Wide Web (WWW) and for obtaining information from other sources. Some of the Netscape Communicator functions are:

View/process text/html files as well as other MIME formats
Provide an interface to Telnet, Gopher, FTP, Email, and Newsgroups
Read content of bulletin boards on the world-wide-web

Netscape Communicator is used to perform the following operator functions listed in Table 4.12.3-1. Please refer to the Netscape Communication's Help option for additional information on functionality not explicitly mentioned here.

Table 4.12.3-1. Common ECS Operator Functions Performed with Netscape Communicator (1 of 2)

Operating Function	Command/Action	Description	When and Why to Use
View Web Pages	Main window	• Operator views pages written in HTML source code. • These pages provide images, text, and form templates.	To obtain information and to process user-interactive forms.
Process Forms	Main window	• Forms are provided for operator input. • Certain operations require a password.	Used to search or manipulate the existing database (functions add, delete, modify.)
Read a message and attachments	Netscape Mail and Discussions window	Allows the operator to read messages received. If there are any file attachments, they can also be read or processed if they are not text files.	To read a message and if applicable, read or process an attachment.
Reply to a message	Compose Window	Allows the operator to send a message to the originator of the message received or to all recipients of the original message.	To send (reply) messages to the originator of a message or all recipients of the message with an option to include the original message in the reply.

Table 4.12.3-1. Common ECS Operator Functions Performed with Netscape Communicator (2 of 2)

Operating Function	Command/Action	Description	When and Why to Use
Send a new message	Compose Window	Allows the operator to create and send a message. Text or binary files can be attached to the message.	To send a new message to one or more recipients with attached files.
Delete/undelete messages	Netscape Mail and Discussions window	Allows the operator to mark messages for deletion. The messages are permanently deleted when the Update option is selected or when quitting Messenger Mailbox. Messages can only be undeleted before Update is selected or before quitting Messenger Mailbox.	To delete messages and free disk storage space.
Browse bulletin boards	Netscape Message Center window	Allows for exchange of information with users and scientists that share the same interest.	To ask or provide information on the BB subject to a large community of users.

4.12.3.1 Quick Start Using Communicator

For more information, the Netscape Communication's Help option is available online (Open the "Help" pulldown menu from the Netscape Communicator main screen and select Help Contents. The main page with the contents of the Netscape Help appears. The operator can select subjects he/she is interested in by following the available links. By opening the “File” menu on the main page and selecting “Print…” , a hardcopy of the displayed text can be obtained.

4.12.3.1.1 Command Line Interface

To execute Netscape Communicator from the command line prompt use:

> netscape &

4.12.3.2 Netscape Communicator Main Screen

Once invoked, Netscape Communicator displays the startup screen shown in Figure 4.12.3-1.

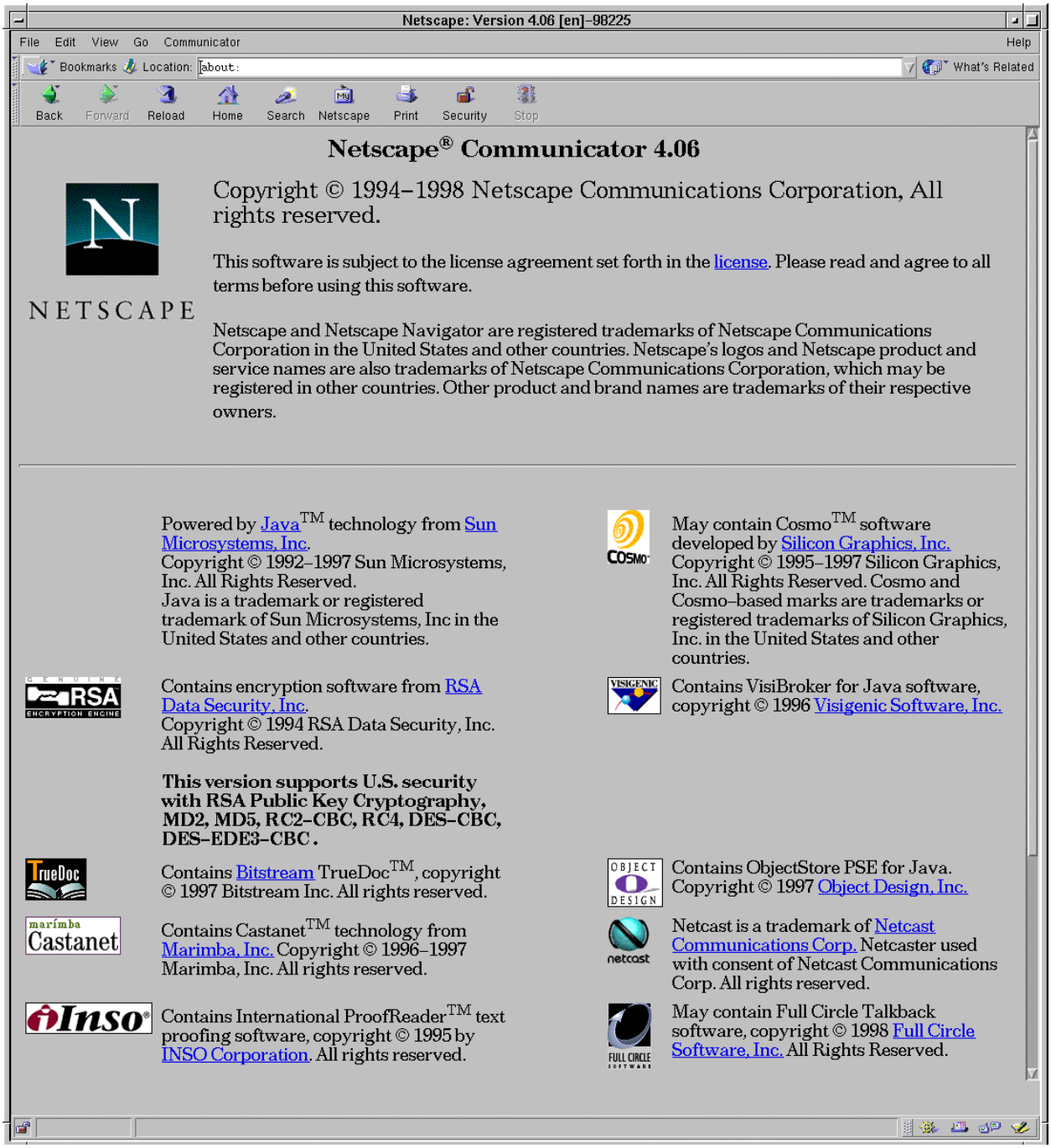

Figure 4.12.3-1. Netscape Communicator: Browser with Display Field

Clicking the mouse anywhere in the startup screen causes the browser to display the user's selected home page. An example of a home page is the ECS Data Handling System page shown in Figure 4.12.3-2.

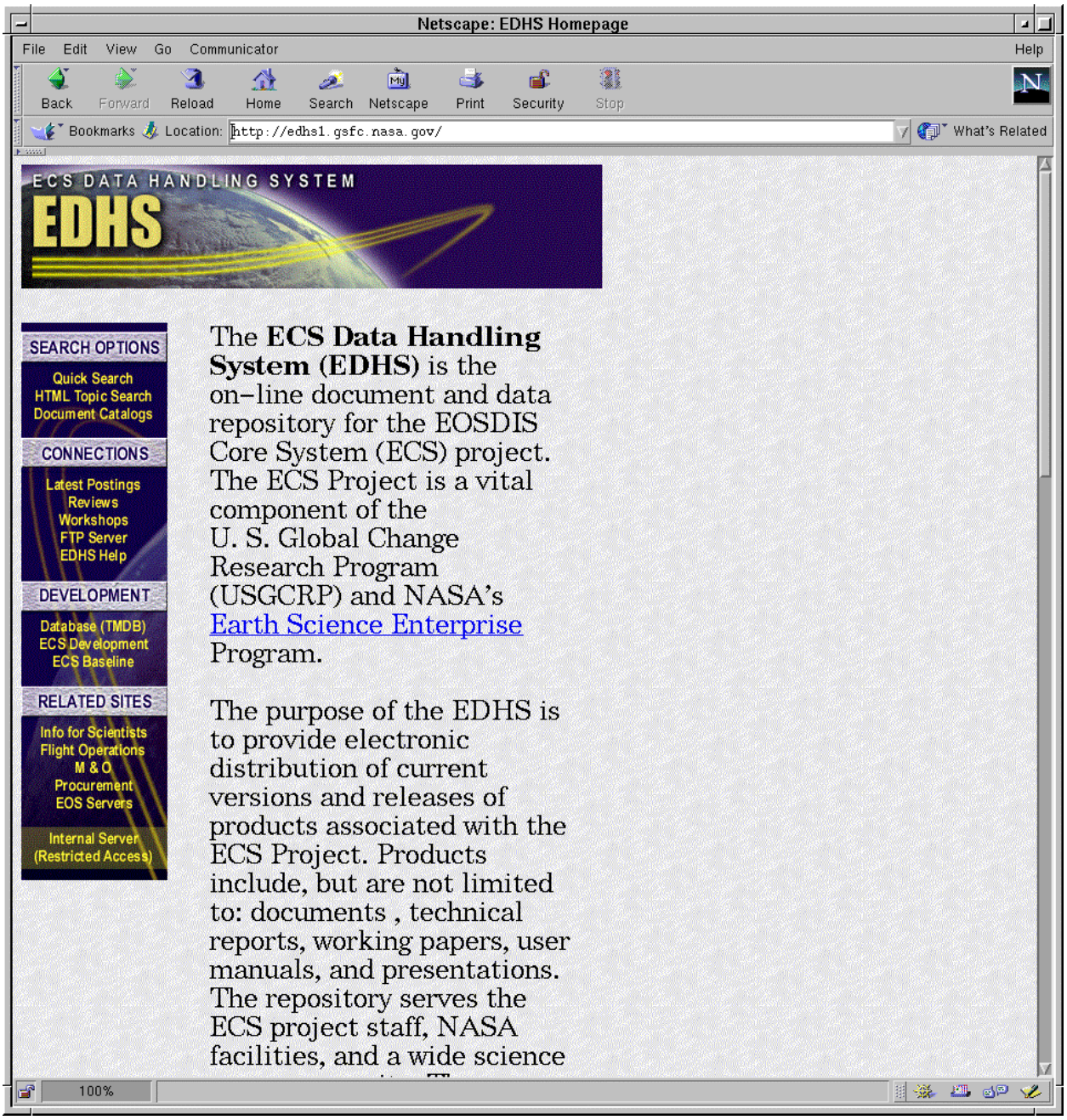

Figure 4.12.3-2. Netscape Communicator: EDHS Home Page

From the start-up Netscape Communicator screen, the operator has several choices for loading pages in any of the MIME formats known by Netscape Communicator:

- Move the cursor to a link in the display field and click on this link
- Select a URL from the "Bookmarks" pulldown menu

- Click on “File” and then “Open Page” of the Netscape Communicator Toolbar to enter a URL address or a file
- In the “Location” text field beneath the Toolbar and Directory Buttons, type Ctrl+U (^U) to erase the line and type the desired URL
- Modify a URL displayed in the “Location:” text area. Use the mouse to select the portion to be changed, press <Backspace> to delete the highlighted text, and enter the new text

It is recommended that operators have bookmarks of pages to be accessed frequently (file bookmarks.html in the ~/.netscape directory). Refer to the *Netscape Communicator Handbook* for further details.

Buttons at the lower right corner of the screen provide direct access to functionality provided by, respectively, the browser, the mail message, the discussion group, and the composer windows.

4.12.3.3 Required Operating Environment

For all COTS packages, appropriate information on operating environments, tunable parameters, environment variables, and a list of vendor documentation can be found in a CM controlled document for each product. To find the documentation for Netscape, refer to the ECS Baseline Information System web page, URL http://cmdm.east.hitc.com/.

4.12.3.4 Databases

Netscape Communicator can interface with Sybase tables via cgi programs when operators process forms. Refer to the appropriate sections for the databases used by ECS tools accessible via Netscape.

While these databases are not directly required for the operation of Netscape Communicator, some form processing features would be hampered if the interface to these databases does not work.

4.12.3.5 Special Constraints

None.

4.12.3.6 Outputs

Netscape Communicator provides the outputs listed in Table 4.12.3-2 below.

Table 4.12.3-2. Netscape Communicator Outputs

Output	Description and Format
Screen Display	Shows the Netscape Communicator browser GUI screen and adjusts to the screen format.
Hardcopy of Display Window	Printed version of the contents of the display window.
Display Window saved to disk	Contents of the display window can be saved to disk in Text, Source or Postscript format.
Modified, deleted or created data files	Processing of forms allows the operator to modify, delete or create data files.

4.12.3.7 Event and Error Messages

Netscape Communicator issues both status and error messages to document the status of loading a document or to display the reason for not loading a document. For further information, refer to the *Netscape Communicator Handbook*.

4.12.3.8 Reports

None.

4.12.4 iPlanet Web Server

iPlanet Web Server, Enterprise Edition 6.0 is a multi-process, multi-threaded, secure web server built on open standards. It provides high performance, reliability, scalability, and manageability for any size enterprise, and it includes modules for creating and managing Web content, for extending or replacing functions of the server (e.g., through Java servlets and JavaServer pages), and for providing application-specific services such as security and access control.

In ECS, iPlanet Web Server is used by several subsystems to access HTML files and to service web-based applications. It is installed locally on machines that run ECS applications relying on it. A distinct instance of an iPlanet Web Server is created for each such application, one per mode in which the application runs. For example, ECS' Order Manager, Data Pool GUI, and BMGT all need to use iPlanet Web Server, and each of them runs in the three modes on sites' Data Pool Server machines. Consequently, nine instances of the iPlanet Web server are required - one for each of the three applications in each mode. Applications communicate with the appropriate instance via a unique port number. The port numbers these iPlanet Web Servers use can be found in the ECS baseline document, 910-TDA-009, ECS Software Port Mapping Baseline.

An additional instance of the iPlanet Web Server known as the Administration Server is created whenever iPlanet Web Server is installed on a machine. You use it to manage all Web Server instances.

Table 4.12.4-1 summarizes the iPlanet Web Server functions used by ECS and references vendor guides that describe their use. A complete set of vendor documents is available on the Internet at http://docs.sun.com/db/coll/S1_ipwebsrvree60_en. The set includes:

- *iPlanet Web Server 6.0 Enterprise Edition Administrator's Guide*
- *iPlanet Web Server 6.0 Enterprise Edition Installation Guide*
- *iPlanet Web Server 6.0 Enterprise Edition NSAPI Programmer's Guide*
- *iPlanet Web Server 6.0 Enterprise Edition NSAPI Programmer's Guide to Servlets*
- *iPlanet Web Server 6.0 Performance Tuning, Sizing, and Scaling Guide*
- *Release Notes for iPlanet Web Server 6.0 Enterprise Edition*

The *Administrator's Guide* is available also as context-sensitive help with the Administration Server.

Table 4.12.4-1. Common ECS Operator Functions Performed with the iPlanet Web Server (1 of 3)

Operating Function	Command/Script	Description	When and Why to Use
Administer iPlanet web servers	Administration Server GUI (See Administrator's Guide, Chapter 2, "Administering iPlanet Web Servers")	Allow operators to add and remove web server instances.	When applications needing web servers are installed or removed.
Set Administration Preferences	Administration Server GUI (See Administrator's Guide, Chapter 3, "Setting Administration Preferences")	Allow operators to: • Stop the Administration Server • Edit its listen socket settings • Change the user account under which its processes run • Change its superuser settings • Specify log file options, including log file rotation • Configure JRE paths	When iPlanet is installed and when the Administration Server needs reconfiguration.
Provide security and encrypt transactions	Administration Server GUI (See Administrator's Guide, Chapter 5, "Securing Your Web Server)	Allow operators to: • Create a trust database • Request, install, and manage VeriSign and other server certificates • Install and manage certificate revocation lists (CRLs) and compromised key lists (CKLs) • Enable client authentication	As needed to activate security features designed to safeguard data, deny intruders access, and allow access to those authorized.

Table 4.12.4-1. Common ECS Operator Functions Performed with the iPlanet Web Server (2 of 3)

Operating Function	Command/Script	Description	When and Why to Use
Configure web servers	Server Manager GUI (See Administrator's Guide, Chapter 7, "Configuring Server Preferences and the online *Performance Tuning and Sizing Guide* at http://docs.iplanet.com/docs/manuals/enterprise.html. ")	Allows operators to: • Start and stop web server instances • Adjust performance settings • Edit configuration file (magnus.conf) settings and apply them to the server • Add and edit listen sockets • View, manage, and archive logs • Monitor server activity and quality of service • Edit file cache settings	As needed to improve web server performance, troubleshoot problems, and support use by ECS custom code.
Analyze log files	Server Manager GUI Administration Server GUI (See Administrator's Guide, Chapter 9, "Using Log Files")	Allows operators to: • View access logs • View error logs • Set logging preferences	As needed to monitor and troubleshoot web server activities.
Monitor servers	Server Manager GUI (See Administrator's Guide, Chapter 10, "Monitoring Servers")	Allows operators to: • Compile and view a variety of server performance statistics in real-time • Set bandwidth and max connections parameters for enforcing quality of service policies	As needed to monitor, manage, and troubleshoot web server activities and to tune server performance.

Table 4.12.4-1. Common ECS Operator Functions Performed with the iPlanet Web Server (3 of 3)

Operating Function	Command/Script	Description	When and Why to Use
Program the server	Class Manager GUI (See Administrator's Guide, Chapter 16, "Extending Your Server With Programs")	Allows operators to: • Install CGI programs, Java Servlets and JavaServer Pages • Configure how the server is to run them	When installing new server-side applications or changing how the applications are to be run.
Manage server content	Class Manager GUI (See Administrator's Guide, Chapter 16, "Content Management")	Allows operators to: • Set primary and additional document directories • Configure document preferences • Configure URL forwarding • Customize error responses • Specify a document footer • Restrict the use of file symbolic links • Set the server to parse HTML files • Set cache control directives	When creating or altering web server instances, to specify where documents to be served are located. When customized responses to client requests are warranted. When restrictions are needed on information cached by proxy servers.

4.12.4.1 Quick Start Using iPlanet Web Server

iPlanet web servers are managed with the help of the following four user interfaces:

- Administration Server – contains the Java forms for managing, adding, removing, and configuring web server instances
- Server Manager - contains the Java forms for configuring individual instances of web servers and for adding and configuring classes of virtual servers
- Class Manager – contains the Java forms for managing, adding, removing, and configuring virtual servers. Virtual servers allow you, with a single installed server, to offer companies and individual domain names, IP addresses and some server administration capabilities. A default virtual server is created automatically for each web server instance
- Virtual Server Manager – contains pages that allow you to see and edit all the settings for a single virtual server

Note: ECS currently uses multiple instances of the web server rather than virtual servers. In past releases, iPlanet Web Server's virtual servers did not support unique configuration information.

The Server Manager, Class Manager, and Virtual Server Manager are accessed from the Administration Server GUI. The Administration Server must be running before the operator can access the Administration Server GUI.

4.12.4.1.1 Command Line Interface

The preferred method for starting the Administration Server operationally is to type the following as root:

 # /etc/init.d/iplanetadm start

This starts the administration server using the port specified during installation.

To start the Administration Server GUI and proceed to access the functionality discussed in Section 4.12.4.1, start a web browser then enter the URL for the administration server as follows:

http://<*servername*>.<*ECSdomain*>.<*domain*>:<*portnumber*>

The operator is then prompted for a username and a password. Once this information is entered the Administration Server web page appears as shown in Figure 4.12.4-1.

Note: The browser used for this task must be capable of supporting frames and JavaScript. Netscape Communicator 4.78, included in the ECS baseline, is capable of supporting both frames and Java Script.

4.12.4.2 *iPlanet Web* Server Main Screen

The Administration Server GUI is iPlanet's main web server screen. It is used to administer all iPlanet Web Server instances. The screen has six tabs, each of which contains buttons for accessing Java forms to perform functions that govern the Administration Server or all the other web servers under its control. The tabs are:

- Servers tab (shown in Figure 4.12.4-1) - for adding (i.e., creating) and removing web server instances and invoking the Server Manager GUI. Operators invoke the Server Manager GUI by first selecting a web server from the tab's Select A Server pulldown menu, then pressing the Manage button
- Preferences tab – for stopping the Administration Server; setting runtime options for the Administration Server (such as process owner, port number, and logging parameters); and viewing the Administration Server's access and error logs
- Global Settings tab – for configuring or enabling a directory service, access control, iPlanet's built-in cron facility, a Java runtime environment or development kit, and SNMP options applicable to all web servers under the Administration Server's control
- Users&Groups tab – for creating and modifying users, groups, and organizational units in an LDAP database. ECS does not presently use an LDAP database, so attempts to access this tab are rejected
- Security tab – for creating a trust database; obtaining, installing, and managing server certificates; and managing certificate revocation and compromised key lists for the Administration Server

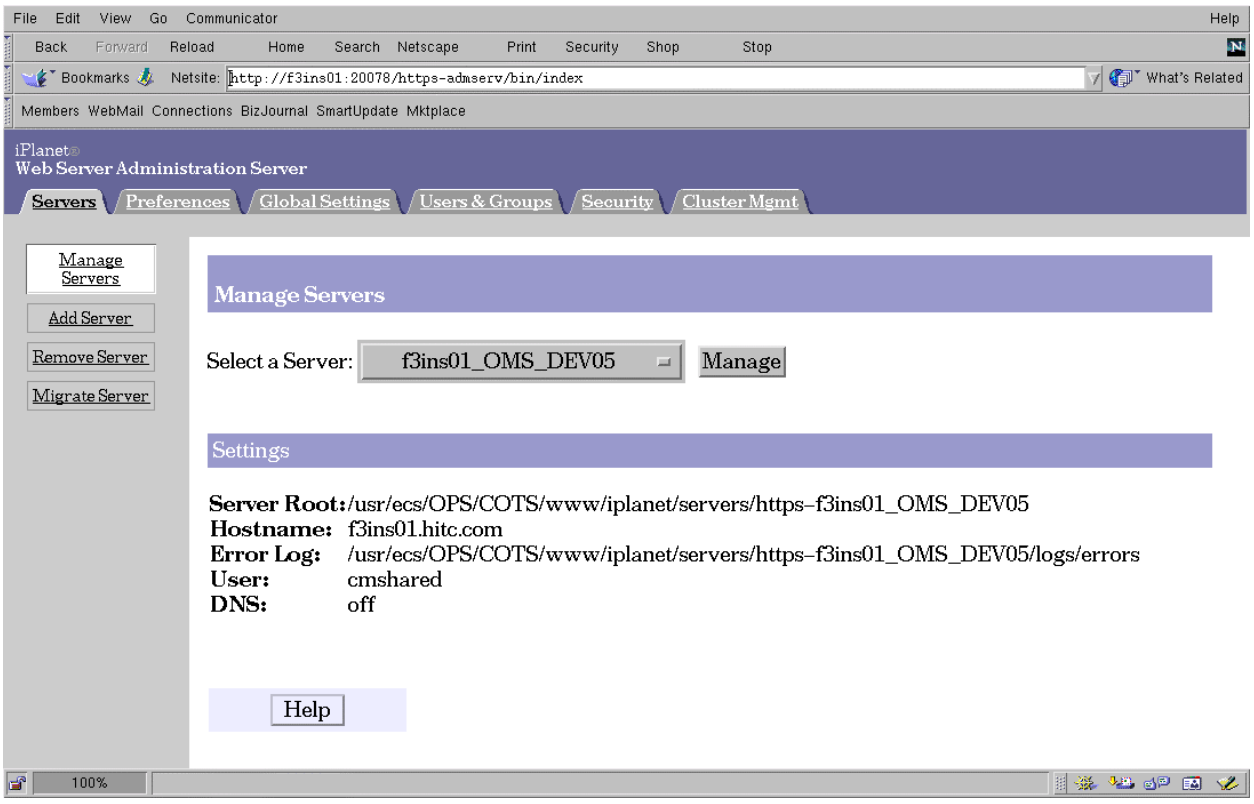

Figure 4.12.4-1. iPlanet Web Server Administration Server Screen

- Cluster Management tab – for establishing and maintaining a group of iPlanet Web Servers on multiple machines that can be administered by a single master Administration Server

4.12.4.2.1 *iPlanet Web* Server: Server Manager Screen

Operators use the Server Manager GUI for managing a web server instance. (Web server instances are created via the Administration Server GUI.). The screen has eight tabs, each of which contains buttons for accessing Java forms to perform functions governing a single web server and its virtual web servers. The tabs are:

- Preferences tab (shown in Figure 4.12.4-2) – for starting and stopping the server and configuring runtime options for it such as port number, MIME types, caching, thread pools and performance tuning parameters
- Security tab – for creating a trust database; obtaining, installing, and managing server certificates; and managing certificate revocation and compromised key lists. This tab functions the same as the Security tab on the Administration Server GUI, but it applies to a web server other than the Administration Server
- Logs tab – for viewing and managing the web server's access and error logs. Forms also let operators control the amount of information recorded in the access log, configure automatic rotation of log files, and generate statistics based on log contents

- Monitor tab – for monitoring a web server's activity using built-in monitoring functions and SNMP, and for setting quality of service parameters (i.e., bytes per second and max connections)
- Virtual Server Class tab – for creating and modifying virtual server classes. It also provides access to the Class Manager GUI. By default, all virtual servers in a class have the same settings
- Java tab – for configuring Java features for a web server. This includes enabling web applications, servlets and JavaServer Pages (JSP), configuring Java Virtual Machine attributes, and managing session and JSP cache files
- Legacy Servlets tab – for specifying servlet properties as in iPlanet 4.x
- Search tab – for searching the contents and attributes of documents on the web server. This tab supports creating and maintaining document collections, organizing and re-indexing collections at pre-determined times, and defining text search patterns, and configuring what users see when they get search results

Three buttons that appear above this screen's tabs are:

- Server Manager – for choosing a different web servers to configure, including the Administration Server
- Class Manager – for invoking the Class Manager GUI to configure virtual servers for the web server
- Apply – for placing configuration changes into effect

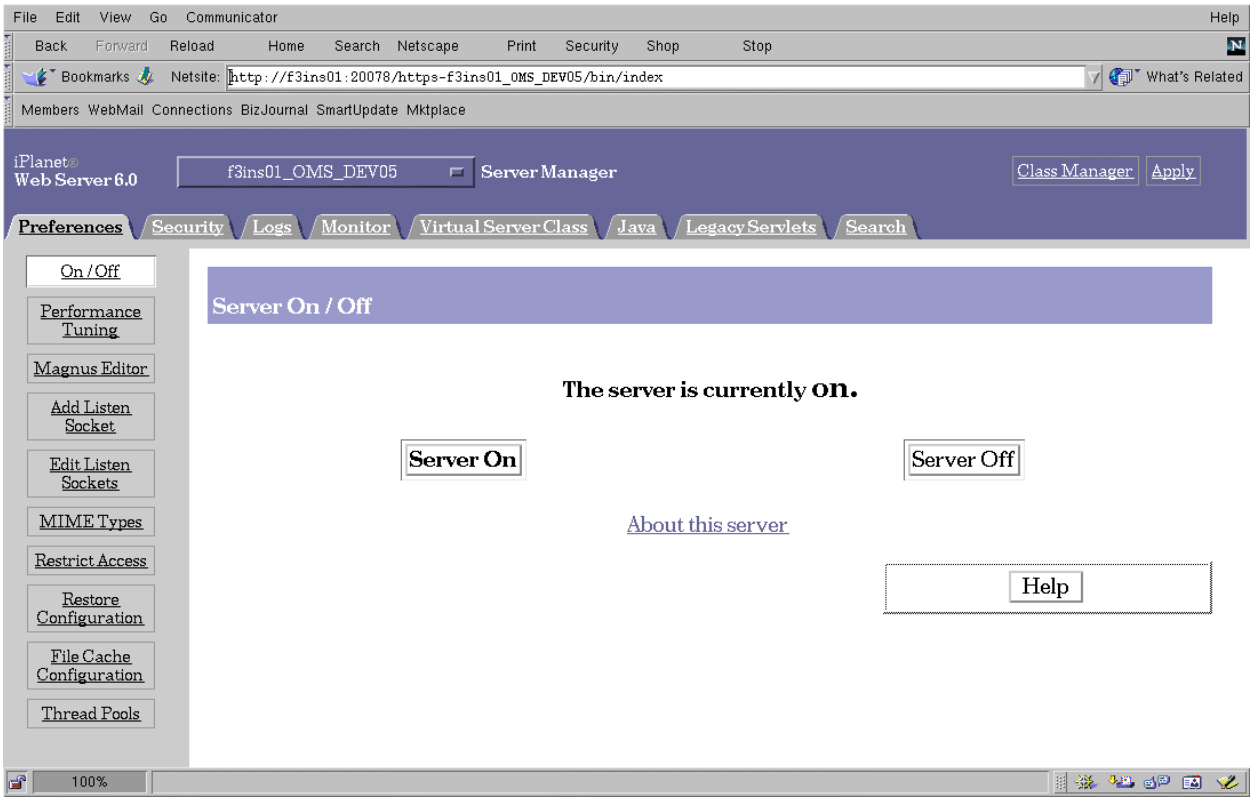

Figure 4.12.4-2. iPlanet Web Server: Server Manager Screen

4.12.4.2.2 *iPlanet Web* Server Class Manager Screen

Operators use the Class Manager GUI to create and configure virtual web servers for a web server instance. The Class Manager contains settings that affect a single class or single virtual server. You can set services for the class in the Class Manager, as well as add virtual servers (members of the class) and configure settings for an individual virtual server.

The screen has four tabs, each of which contains buttons for accessing Java forms to perform functions governing all the classes of virtual servers for the web server. The tabs are:

- Virtual Servers tab (shown in Figure 4.12.4-3) – for managing and creating virtual servers and editing basic virtual server properties. Preferences set via this tab govern MIME types, access control lists, quality of service, logging, web applications, and CGI programs used by the virtual servers. The tab also provides access to the Virtual Server Manager GUI. By default, all virtual servers in a class have the same settings.
- Programs tab – for configuring the CGI programs for the virtual server class. Use this tab to specify the location and query handler (if any) of your CGI programs as well as the prefix that URLs can use as an alias for the path to the programs.

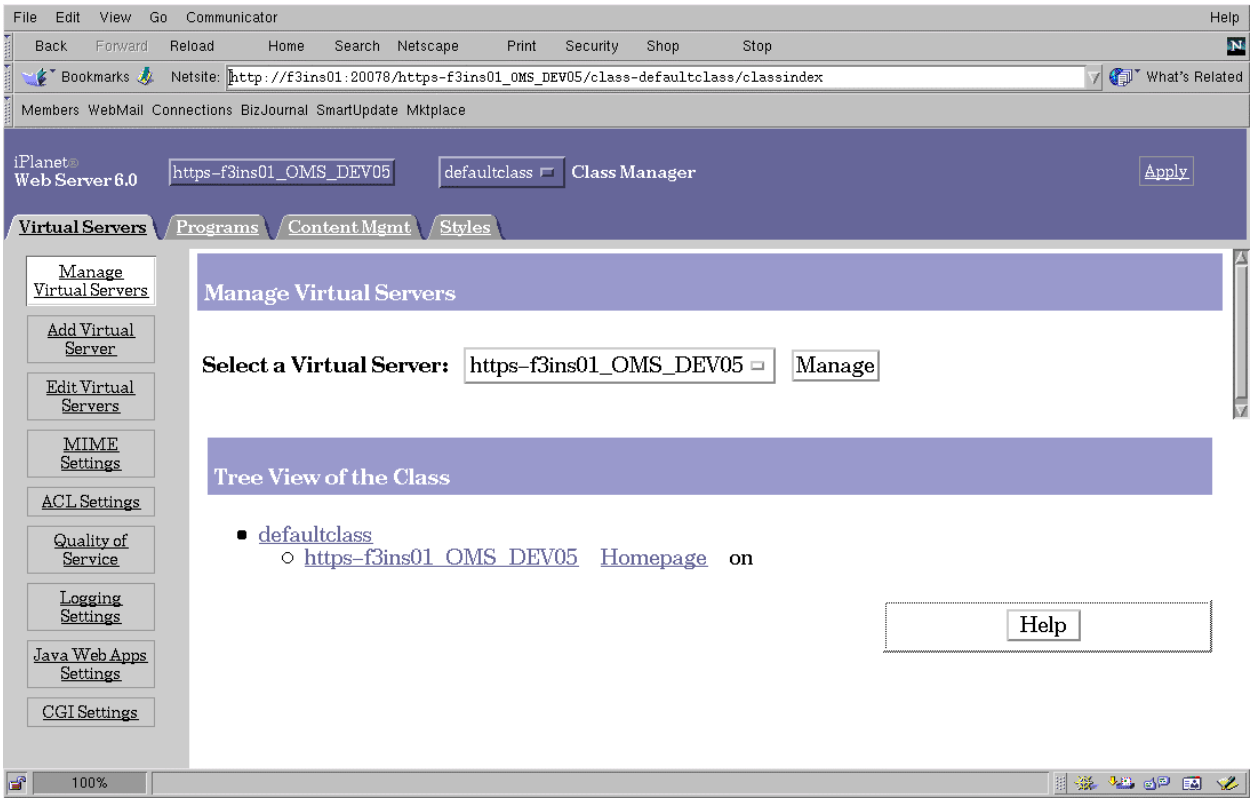

Figure 4.12.4-3. iPlanet Web Server Class Manager Screen

- Content Management tab – for managing the web content that the class of virtual servers supports. Use this tab to specify paths to your root and additional document directories,

establish directories where users can create and store their own home pages and documents, and define various properties governing how requests for content are to be handled
- Styles tab – for creating, editing, and applying configuration *styles* to files and directories. A style is a collection of predefined options that facilitates assigning properties for the web server's handling of files and directories

The three buttons appearing above this screen's tabs are:

- Server Manager – for returning to the Server Manager GUI
- Class Manager – for selecting a different class of virtual servers to manage
- Apply – for placing configuration changes into effect

4.12.4.2.3 *iPlanet Web* Server Virtual Server Manager Screen

Operators use the Virtual Manager GUI to configure a single virtual server. The Virtual Server Manager contains settings that affect a single virtual server. These settings override those initially inherited from the server's class. The screen has the following two tabs:

- Status tab (shown in Figure 4.12.4-4) – for viewing certain, key attributes of the virtual server. Two of the attributes are hyperlinks to pages for browsing the server's access and error logs.
- Settings tab – for specifying values for most of the virtual server's configurable attributes. These attributes (discussed previously), including document root, log file locations, access control lists, MIME types, and CGI parameters.

Four buttons that appear above this screen's tabs are:

- Server Manager – for returning to the Server Manager GUI
- Class Manager – for selecting a different class of virtual servers to manage
- Virtual Server Manager – for selecting a different virtual server to manage
- Apply – for placing configuration changes into effect

4.12.4.3 Required Operating Environment

In ECS, the iPlanet Web Server is deployed to run on Sun machines under Solaris 8. Operators must have Netscape Communicator version 4.72 or higher and Java and cookies enabled in their browsers to use it.

4.12.4.4 Databases

The iPlanet Web Server uses an internal, trust database to store public and private keys in support of Secure Socket Link encryption. The Administration Server and each server instance can have its own trust database. In addition, iPlanet Web Server allows operators to define one or more Lightweight Directory Access Protocol (LDAP) databases that virtual servers can use for user authentication. The web servers themselves do not manage LDAP databases, and ECS does not currently use them. Refer to the *iPlanet Web Server 6.0 Enterprise Edition Administrator's Guide* for further information on databases used by the Web Server.

4.12.4.5 Special Constraints

None.

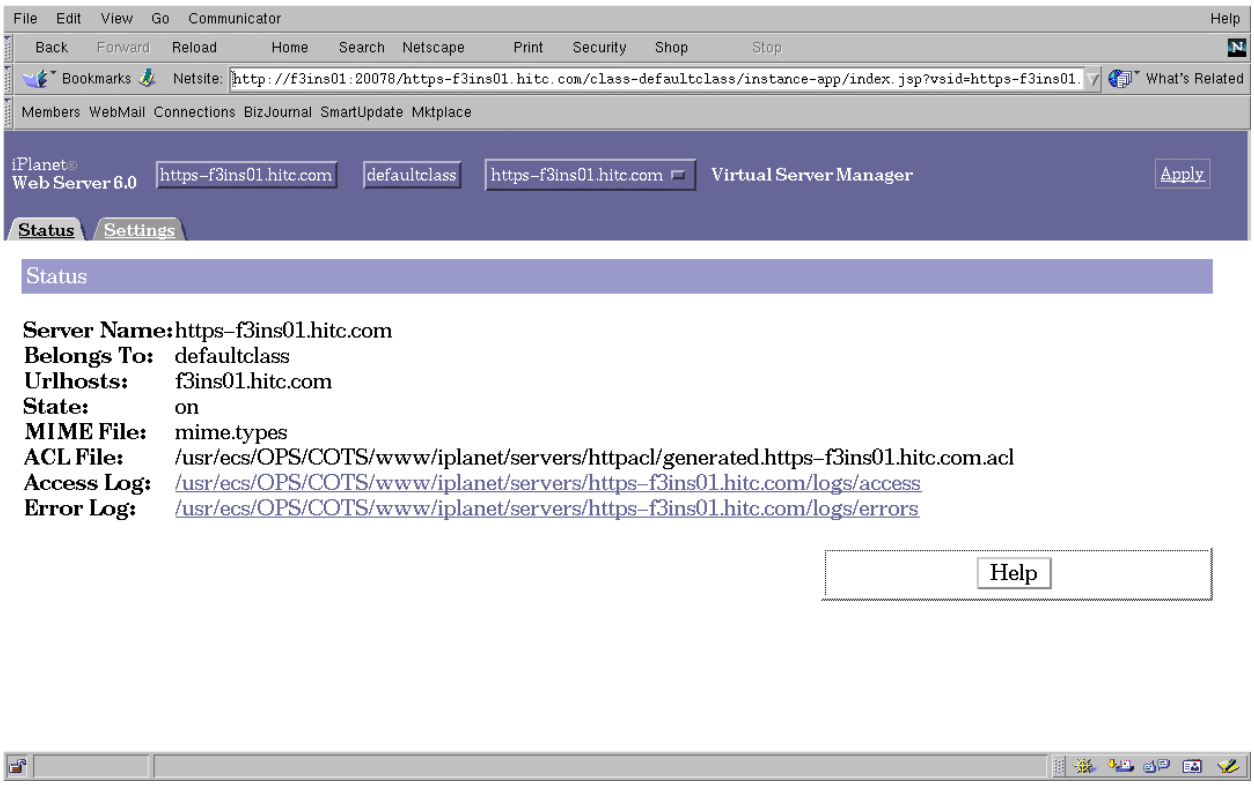

Figure 4.12.4-4. iPlanet Web Virtual Server Manager Screen

4.12.4.6 Outputs

The Web Server supports real-time monitoring of web servers' activities. After enabling statistics, operators can view data about connections, the Domain Name Service (DNS), keep alives, cache and virtual servers. These can help them identify how many resources their servers need. Examples include:

Number of idle (i.e., awaiting connection) threads
Number of threads dealing with reading requests
Number of threads dealing with writing responses
Number of threads dealing with resolving hostnames
Number of KeepAlive hits and flushes
Number of DNS cache hits and misses

Additionally, server monitoring provides totals such as:

Number of bytes received and sent
Total requests
Number of requests by type
Number of connections

Enable and monitor statistics using the Monitor Current Activity page, which is accessible from the Monitor tab of the Server Manager GUI. See the *Administrator's Guide*, Chapter 10, "Monitoring servers" for further information.

To monitor a greater variety of server statistics, use iPlanet's *perfdump* utility. The utility must first be "installed" by editing the web server's obj.conf configuration file and restarting the server. Statistics can then be viewed by pointing a browser to http://<host>/.perf. See the *Performance Tuning, Sizing, and Scaling Guide* for details.

4.12.4.7 Event and Error Messages

Each web server uses two files to record server activity. The *access* log file records requests to the server and server responses. The *error* log file lists errors the server has encountered. Both files typically reside in the web server's logs directory, but operators can control their location. Operators can also have the system automatically archive these files. See the *Administrator's Guide* for details.

For *access* logs only, operators can control the amount and format of what gets logged. They can specify whether to log accesses, what format to use, and whether the server should spend time looking up the domain names of the clients when they access a resource. They can also specify the file be written in common logfile format, flexible log format, or a user customizable format. Specify preferences using the Log Preferences page of the Server Manager GUI or edit the web server's configuration files directly. See the *Administrator's Guide* and the *NSAPI Programmer's Guide* for details.

4.12.4.8 Reports

Operators can generate a report about a web server's activity using iPlanet Web Server's log analyzer. The report can contain a variety of statistics such as:

- Total hits and totals for various types of errors
- Most recently logged events
- Most frequent users
- Most commonly accessed URLs, and URL accesses exceeding some threshold amount
- Hosts most often accessing the server, and hosts whose accesses exceed some threshold amount

Operators can choose which of the statistics to include in a report, and output can be generated in HTML or text. However, results depend on what events the operators have the web servers log.

Reports are initiated from the Generate Report page, which is accessible from the Logs tab of the Server Manager GUI. Operators can also run program *flexanlg* from the command line. Refer to the *Administrator's Guide*, Chapter 9 - "Using Log Files", for additional information.

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4.12.5 EOSView

EOSView is a custom Hierarchical Data Format (HDF) file verification tool. It is for use by anyone who wishes to verify or inspect EOS data products in HDF EOS or HDF format. Users include EOS instrument team science software developers and data product designers, DAAC personnel, and end users of EOS data products, i.e., scientists and researchers.

EOSView displays the contents of HDF files and the contents of files containing HDF-EOS data. Individual objects can be selected for display. Displays include raster images, datasets in tables, pseudo-color images of datasets, attributes, and annotations. Simple animation can be performed for a file with multiple raster images.

EOSView has a unique interface for handling HDF-EOS data structures. The Swath/Grid/Point interface uses only HDF-EOS library calls. The EOSView operator does not see the underlying HDF structures but is prompted for which parts of the structure to view.

EOSView is used to perform the operator functions listed in Table 4.12.5-1.

Table 4.12.5-1. Common ECS Operator Functions Performed with EOSView (1 of 2)

Operating Function	Command/Script or GUI	Description	When and Why to Use
Display HDF file contents	EOSView File Contents window	Looks at data file images, metadata, and auxiliary information.	To verify structures put in a file.
Display Raster Image	Image Display window	Displays Browse images, geolocated maps, etc multiple zoom features in image display available pan feature available multiple palettes available.	To view a snapshot of an image (not data).
Animate Raster Images	Animation Window	Presents, in order, images as they appear in each file.	To show a succession of movement (e.g., temperature adjustment from one image to the next).
Display of SDS data in table	SDS data table Vdata table	Displays a one or two dimensional list of data in a scrollable list.	To view/compare associated numbers.
Expand a Vgroup	Select “Vgroup” from File Contents window	Vgroups are logical groupings of information such as Vdata, SDS data, and images.	To view information by a certain subject (e.g., the information associated with Geolocation).

Table 4.12.5-1. Common ECS Operator Functions Performed with EOSView (2 of 2)

Operating Function	Command/Script or GUI	Description	When and Why to Use
Pseudo-color display of SDS data	Image Display Window	Converts data into a visual image.	To view the pseudo-color image of an SDS table.
Display text objects	Text (Attributes) Window	Describes the types of data strings for an individual object or for an entire file.	To look at factors when doing computations (e.g., longitude/latitude).
Hypertext help	On-line Help	On-line help is available from all menu bars.	To help in the navigation and use of EOSView.
Swath/Point/Grid interface (HDF-EOS)	File Contents Display window for swath, point and grid files	View HDF-EOS objects at a high level (i.e., data types cannot be broken down).	To view segments of data in terms of swath, a point on the earth, and grid (e.g., lat/long) data.
Plot VData	EOSView Plot Window	Static line plot display of x and y data (from a Vdata Table).	To view line plot of data capabilities.
Plot SDS Data	EOSView surface/contour plot window	Surface or contour plot of SDS.	To view plots of SDS tables.

4.12.5.1 Quick Start Using EOSView

EOSView, once downloaded from ***edhs1.gsfc.nasa.gov*** using the ftp utility, is started from the UNIX command line by entering:

>>EOSView

4.12.5.1.1 Downloading EOSView

Downloading EOSView is accomplished using the ftp utility as follows:

>ftp edhs1.gsfc.nasa.gov
Name**: anonymous**
Password: **<your e-mail address>**
ftp>**quote site group sdptk**
ftp> **quote site gpass ecs-tkit**
ftp>**cd eosview**

(A README file is also provided in this directory.)
ftp>**get README**

(The *README* file answers many questions you have about running EOSView. Change to the eosview directory that matches your hardware.)

dec/
ibm/
sgi/

sun/
source/

(Once in the directory set type to I, download the files, and exit.)

ftp>**bin**
ftp>**mget ***
ftp>**bye**

The following files are downloaded:

EOSView	(executable)
eosview.csc	(hypertext on-line help file)
eosview.uid	(user interface description file)
eosview.dat	(IDL commands file)

If it is desired to view the EOSView source code, change to the source/ directory and download the file EOSVIEW_source.tar.Z. This is a compressed tar file. To unload the contents of this file, type:

>**uncompress EOSVIEW_source.tar.Z**
>**tar xvf EOSVIEW_source.tar**

Section 4.12.5.3 identifies environment variable settings used by EOSView. These should be initialized prior to starting EOSView.

4.12.5.2 EOSView Main Screen

The EOSView Main Window shown in Figure 4.12.5-1 displays the current version of EOSView and date.

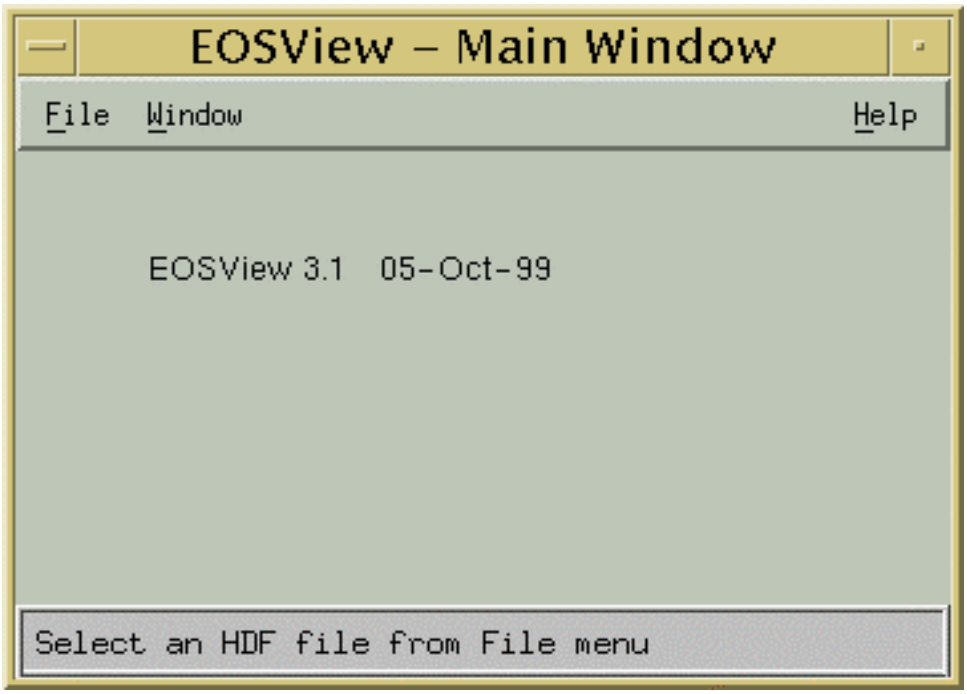

Figure 4.12.5-1. EOSView Main Screen

From the **File** pulldown menu, the operator can select Open or Exit.

- **Open** -- This causes a file selection dialog to appear (shown in Figure 4.12.5-2)
- **Exit** – Exits EOSView

From the **Window** pulldown menu, the operator can select an EOSView screen and have the focus change to that window as long as it is currently open. This feature is described in Section 4.12.5.2.23 "Window Pulldown Menu."

From the **Help** pulldown menu, the operator can select help on context, on help, on window, keys, contents, index and version. This feature is described in Section 4.12.5.2.25 "Help Pulldown Menu."

4.12.5.2.1 EOSView File Selection Dialog

Selecting **Open** from the EOSView File pulldown menu brings up the File Selection Dialog shown in Figure 4.12.5-2. This is a standard file selection dialog box allowing the operator to search through directories and select an HDF file.

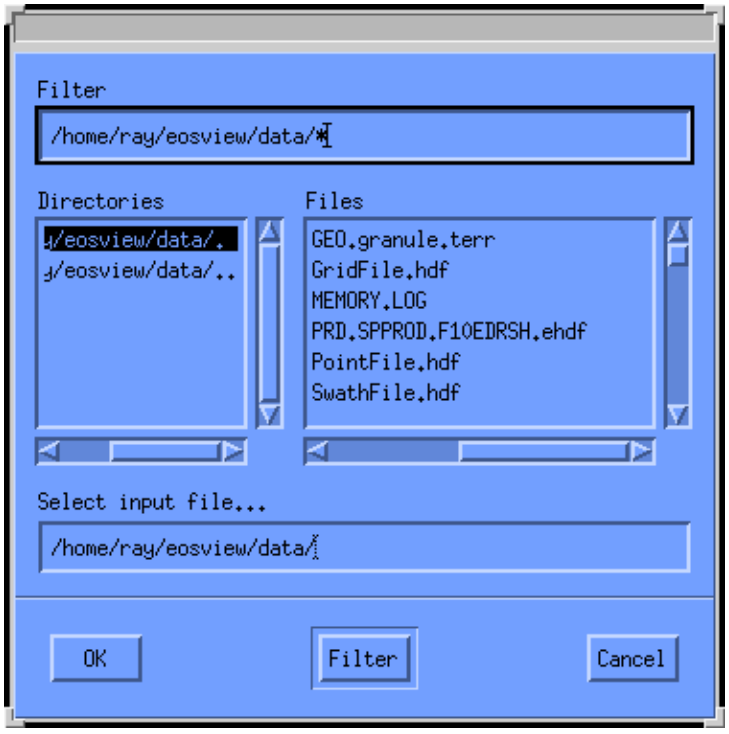

Figure 4.12.5-2. File Selection Dialog

Table 4.12.5-2 describes the File Selection fields.

Table 4.12.5-2. EOSView File Selection Field Description

Field Name	Data Type	Size	Entry	Description
Filter	System generated (can be edited)	Unlimited	Required	Displays file selection parameters to filter the directories.
Directories	Selection	Unlimited	Required	Displays a list of directories.
Files	Selection	Unlimited	Required	Displays a list of files to select from.
Select Input File	System generated (can be edited)	Unlimited	Required	Displays the filename selection.

In addition, the following pushbuttons are provided:

- **OK** – opens the specified file
- **Filter** – filters through the directories in layers until the desired directory/file is displayed
- **Cancel** – closes the file selection dialog

4.12.5.2.2 File Contents Display Pop-up

Once the HDF file has been selected, the EOSView File Contents Pop-up (see Figure 4.12.5-3) for that file appears. This is a scrollable window with the following menu items:

- The **File** pulldown menu (described in Section 4.12.5.2.21) provides additional information about a file and provides a way to close a file
- The **Options** pulldown menu (described in Section 4.12.5.2.22) and its Animated images selection becomes sensitized when the selected file contains multiple Raster Image Groups. This causes all the images to be lined up and displayed in order in an EOSView - Animation Window
- From the **Windows** pulldown menu, the operator can select an EOSView window and have the focus change to that window as long as it is currently open. This feature is described in Section 4.12.5.2.23 "Window Pulldown Menu"
- From the **Attributes** pulldown menu (described in Section 4.12.5.2.24), the operator can view the global attributes for the selected HDF file
- From the **Help** pulldown menu (described in Section 4.12.5.2.25), the operator can select help on context, on help, on window, keys, contents, index and version

To select an HDF object simply double-click on the object displayed in the scrollable window. Objects can be Numeric Data, Vdata, Vgroup, Raster Images, or Grid/Swath/Point data. Each of these objects are described in the following sections.

4.12.5.2.3 Numeric Data Group

In this example, the GEO.granule.terr HDF file was selected from the File Selection Dialog, bringing up the File Contents Display Pop-up shown in Figure 4.12.5-3.

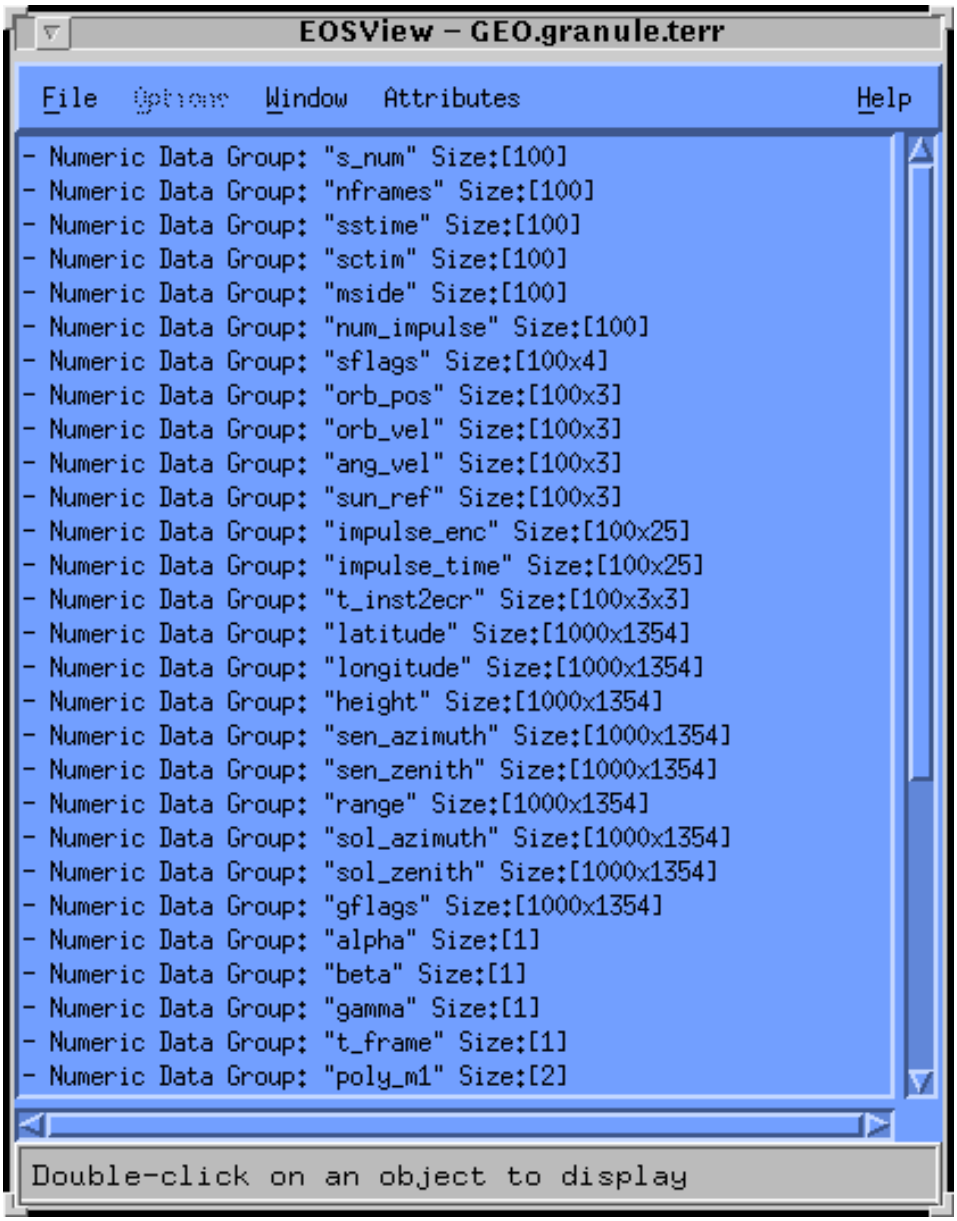

Figure 4.12.5-3. EOSView File Contents Pop-up

Double-clicking on an item from the EOSView File Contents Pop-up (in this example, Numeric Data Group: “sol_azimuth” Size: [1000X1354] was selected) brings up the Multi-Dimension SDS window as shown in Figure 4.12.5-4. This window allows the operator to select dimensions and indices for other dimensions.

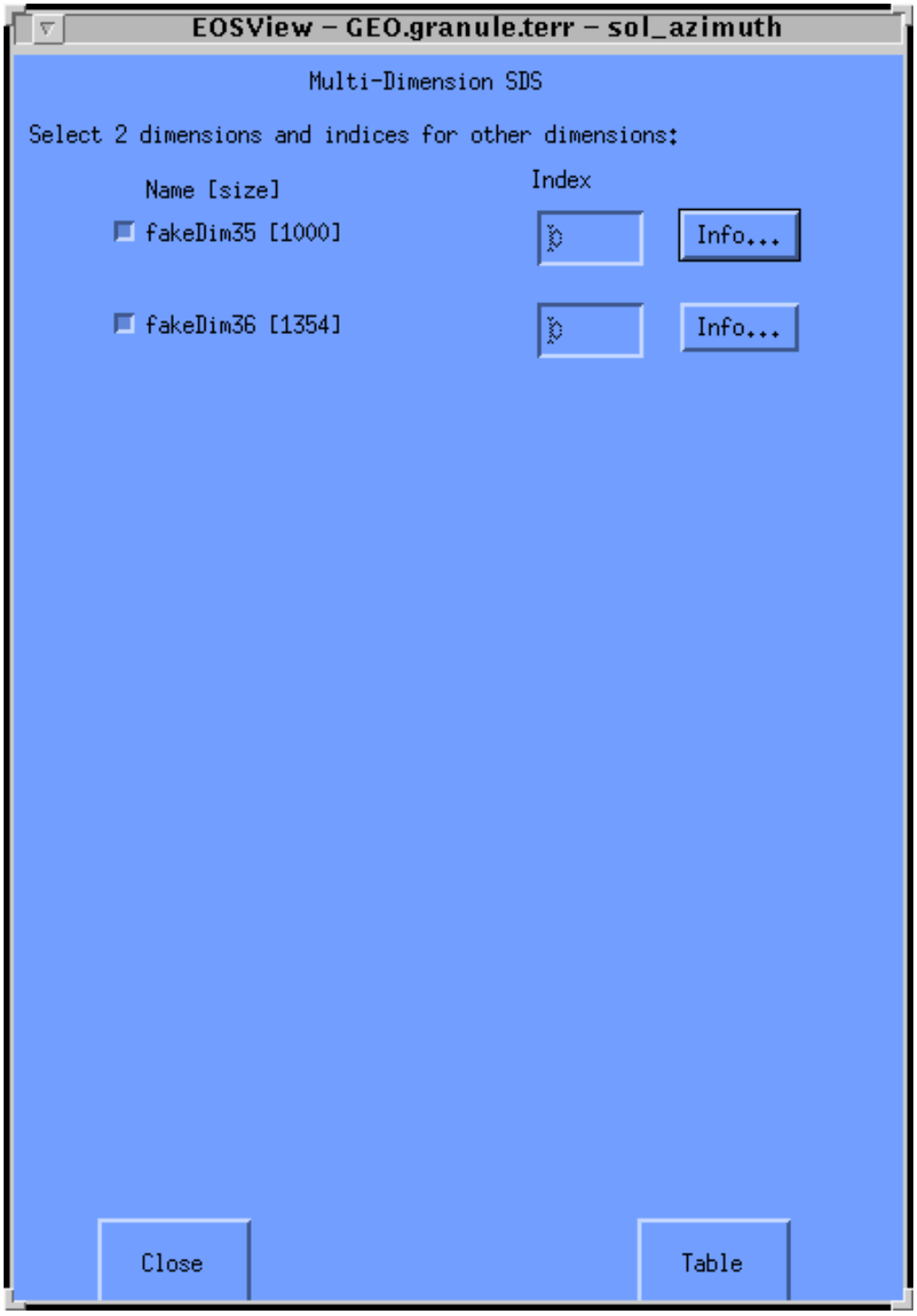

Figure 4.12.5-4. Multi-Dimension SDS Pop-up

Table 4.12.5-3 describes the fields of the Multi-Dimension SDS Pop-up.

Table 4.12.5-3. Multi Dimension SDS Field Description

Field Name	Data Type	Size	Entry	Description
Index	Integer	N/A	Required	Index of involved dimensions. For the selected dimension, the default value is 0. For the unselected dimension, the number can be as large as what is in brackets after the dimension name.
Table	Button	N/A	Optional	Clicking this button brings up a table window (see Figure 4.12.5-6) displaying a 1 or 2 dimensional list of the data as either a Scientific Data Group or Vdata.
Close	Button	N/A	Required	Closes the window.

EOSView can only display 2-dimensional (2-D) datasets. If a dataset contains more than 2-D, a 2-D slice of the dataset needs to be selected. This is accomplished by selecting ONLY 2 dimension boxes to the left of the dimension name. The other dimensions can have an index entered in the text box. Additional information for each dimension can be displayed in a separate window by pressing the button next to the dimension the information is desired. Clicking on the **Info…** button brings up a Dimension Information pop-up shown below in Figure 4.12.5-5.

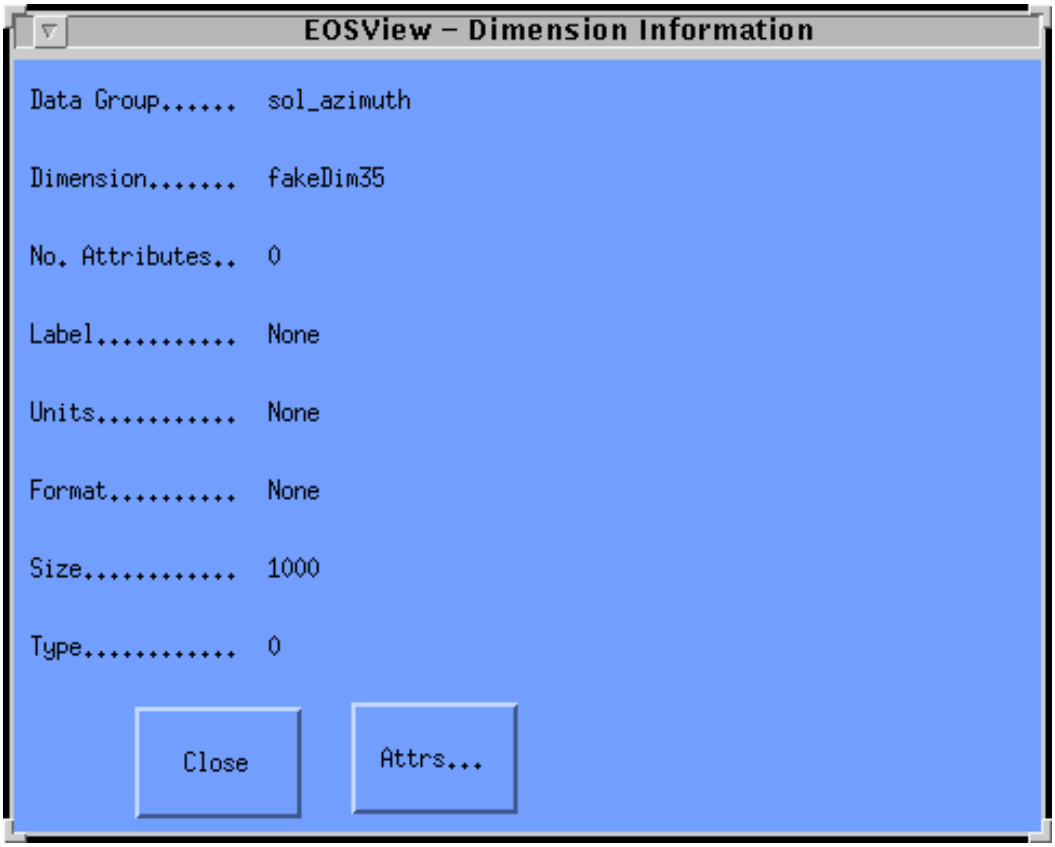

Figure 4.12.5-5. Dimension Information Pop-up

This window contains information such as number of attributes, units, format, size, etc. From this window, the operator can display textual output of the attributes for this dimension by clicking on the **Attrs…** button. Selecting **Close** closes the EOSView - Dimension Information Window.

Selecting the **Table** button from the Multi-Dimension SDS window brings up a table window as shown in Figure 4.12.5-6. The table window displays a 1 or 2 dimensional list of the data as either a Scientific Data Group or Vdata. The window is sizable and contains horizontal and vertical scrollbars.

The **File** pulldown menu contains the following items, as shown in Figure 4.12.5-6:

- **Make Image** - This creates a pseudo-color image of the selected table. Selecting this option causes the Min/Max Values Pop-up to appear (Figure 4.12.5-14)
- **Plot** - if the table has been created from an SDS the operator has the option of converting the table to a surface or contour plot as shown in Figure 4.12.5-7
- **Attributes…** - This displays text attributes assigned to this table. Selecting this option causes the Attributes Text Display Pop-up to appear as shown in Figure 4.12.5-34
- **Statistics** - EOSView has basic statistical capabilities for table data. An SDS table has the minimum, maximum and average for the entire table displayed in the EOSView - Stats window (see Figure 4.12.5-12). For a table created from Vdata data, the same stats are calculated for each column of data (field of Vdata). The EOSView stats window displays the name, minimum, maximum, and average values of a table. The name corresponds to the name of the SDS or Vdata field name. The data is not editable and non-selectable. Hitting the "Ok" button closes the EOSView Stats Window
- **Jump To…** – This option allows the operater to jump to a specific row in a table. Selecting this option causes the Jump To Dialog to appear (Figure 4.12.5-12). The user can enter the desired row number. Once the OK button is pressed the desired row number appears in the first row of the table. See Section 4.12.5.2.7 for a description of the Jump To… option
- **Save** - This option allows the operator to save the table in either ASCII or binary format. Once the operator has selected ASCII or binary from the cascading menu, the EOSView File Save Dialog is displayed (see Figure 4.12.5-13). This window is similar to the EOSView File Open Dialog. EOSView only saves tables to a new file, therefore, a unique file name must be entered in the "Save as:" text field
- **Close Window** - Closes the table window

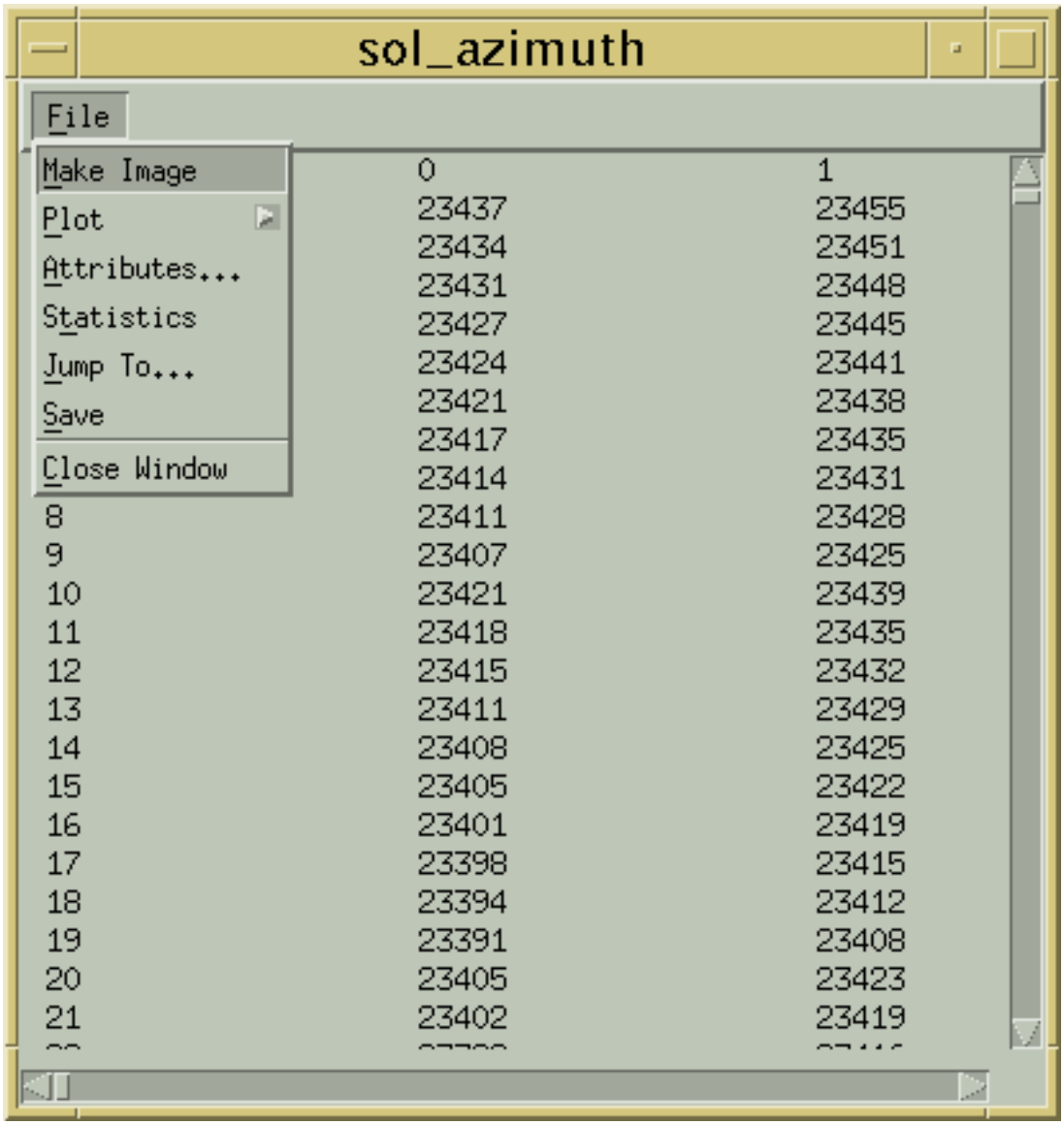

Figure 4.12.5-6. EOSView "sol_azimuth" Table Pop-up

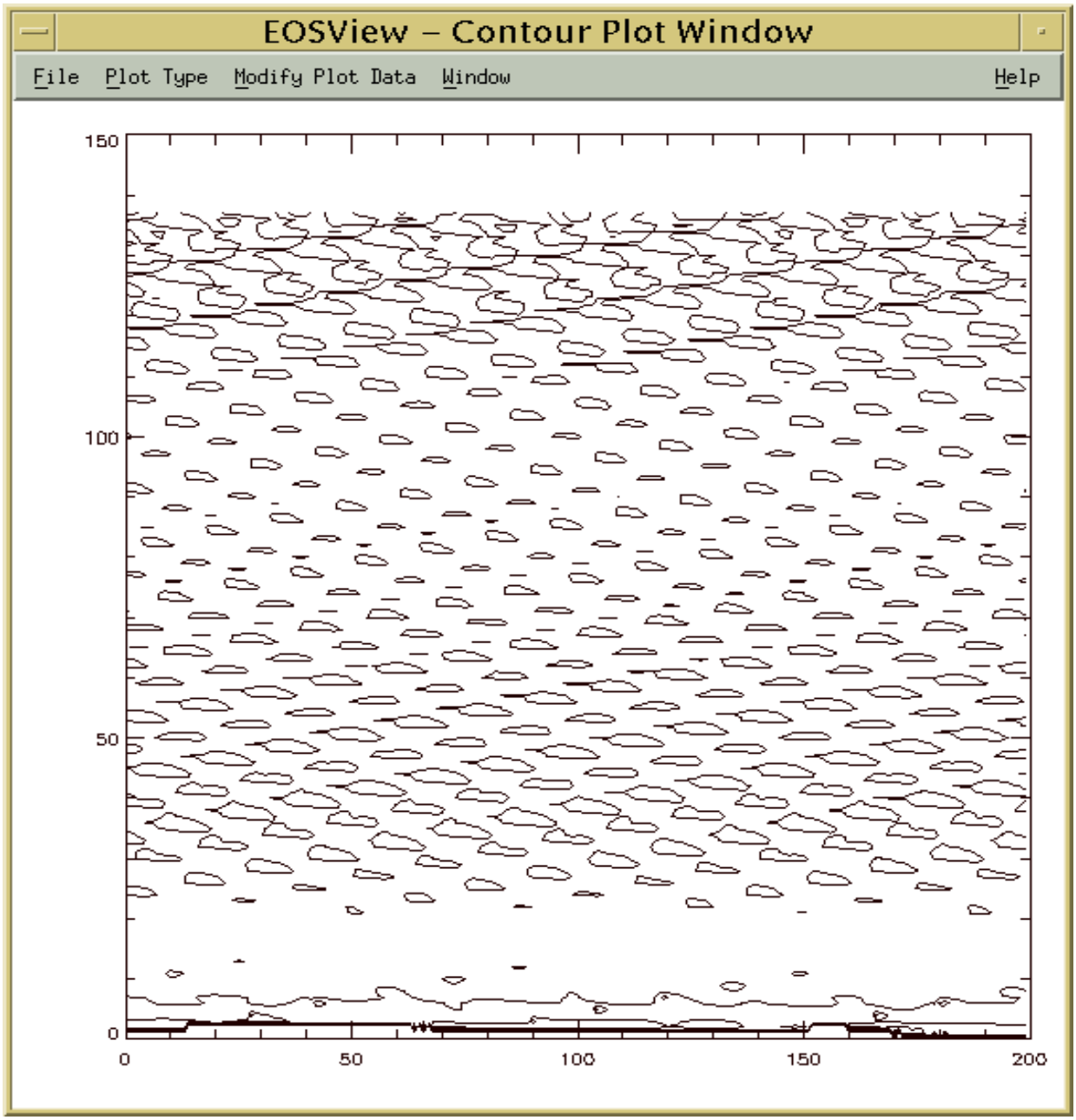

Figure 4.12.5-7. EOSView Contour Plot Pop-up

4.12.5.2.4 Surface/Contour Plot

The EOSView Contour/Surface Display displays a surface or contour plot of the selected Numeric Data Group. The window contains a menubar and can be resized.

- The **File** menubar option contains only the **Close** option. Selecting it closes the surface/contour plot window

- The **Plot Type** menubar option acts as a toggle between the surface and contour plots. If the current plot being displayed is a contour plot then the option listed is **Surface Plot**. If the current plot being displayed is a surface plot then the option listed is **Contour Plot**. Selecting this option causes a new window to appear with the selected plot
- The **Modify Plot Data** menubar option allows the user to modify the plots based on three criteria. The user can modify a plot by excluding a range of data, excluding up to three individual values, or plotting between a minimum and maximum value
- The **Window** option lists, in a pull-down menu, all windows, which are currently open. See Section 4.12.5.2.23 "Window Pulldown Menus"
- The **Help** option provides user supporting information

The option **Select Data Range to Exclude from Plot:** Listed under the **Modify Plot Data** menubar option causes the Contour/Surface Data Range window to appear (Figure 4.12.5-8). The user can select a range of data to exclude from the plot by entering the minimum value to exclude in the Minimum Value text field and the maximum value to exclude in the Maximum Value text field. The user can select the number of contour levels desired by entering the number in the Contour Levels text field. Entering data in the Contour Levels text field is optional. The Contour Levels text fields only appear in the Data Range Pop-up if the plot was a contour plot. Pressing the **Continue** button causes a new plot to be drawn without the data range entered. Pressing the **Cancel** button closes the window with no further action.

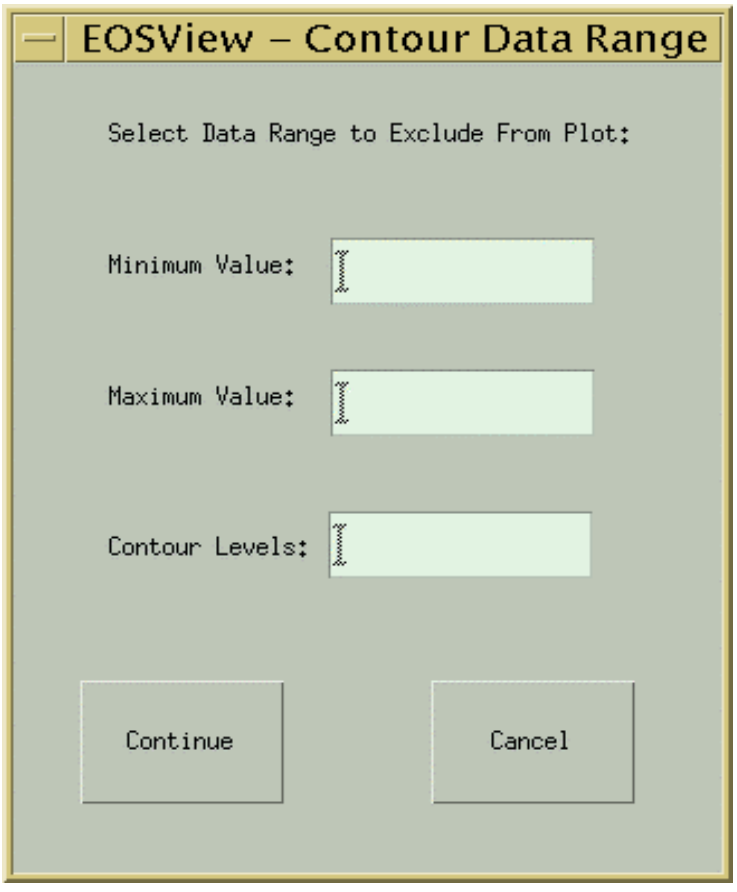

Figure 4.12.5-8. Contour/Surface Data Range Pop-up

The option **Select Data Value to Exclude from Plot:** listed under the **Modify Plot Data** menubar option causes the Contour/Surface Data Value window to appear (Figure 4.12.5-9). The user can enter up to three values that are not plotted. The first value should be entered in the Data Value 1 text field, the second value should be entered in the Data Value 2 text field, and the third value should be entered in the Data Value 3 text field. The user can select the number of contour levels desired by entering the number in the Contour Levels text field. Entering data in the Contour Levels text field is optional. The Contour Levels text fields only appear in the Data Range Pop-up if the plot was a contour plot. Pressing the **Continue** button causes a new plot to be drawn without the selected data values. Pressing the **Cancel** button closes the window with no further action.

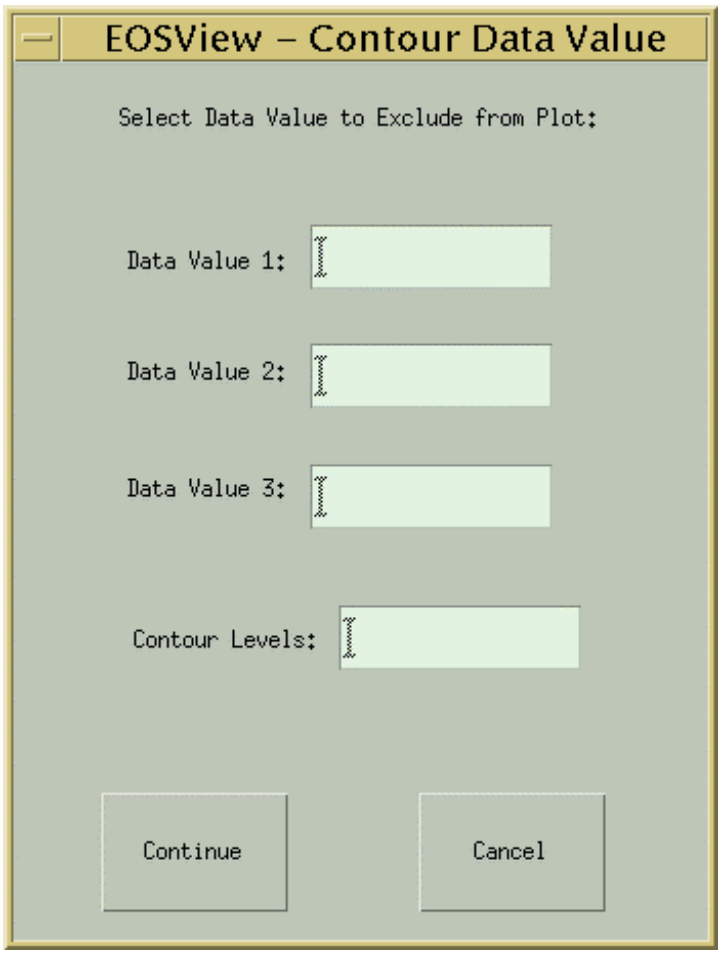

Figure 4.12.5-9. Contour/Surface Data Value Pop-up

The option **Select Minimum and Maximum Range to Plot:** listed under the **Modify Plot Data** menubar option causes the Contour/Surface Min/Max Range window to appear (Figure 4.12.5-10). The user can enter a range of values desired to be plotted. All values less than the minimum value and greater than the maximum value are not plotted. The minimum value to be plotted can be entered in the Minimum Value text field. The maximum value to be plotted can be entered in

the Maximum Value text field. The user can select the number of contour levels desired by entering the number in the Contour Levels text field. Entering data in the Contour Levels text field is optional. The Contour Levels text fields only appear in the Data Range Pop-up if the plot was a contour plot. Pressing the **Continue** button causes a new plot to be drawn using the data range entered. Pressing the **Cancel** button closes the window with no further action.

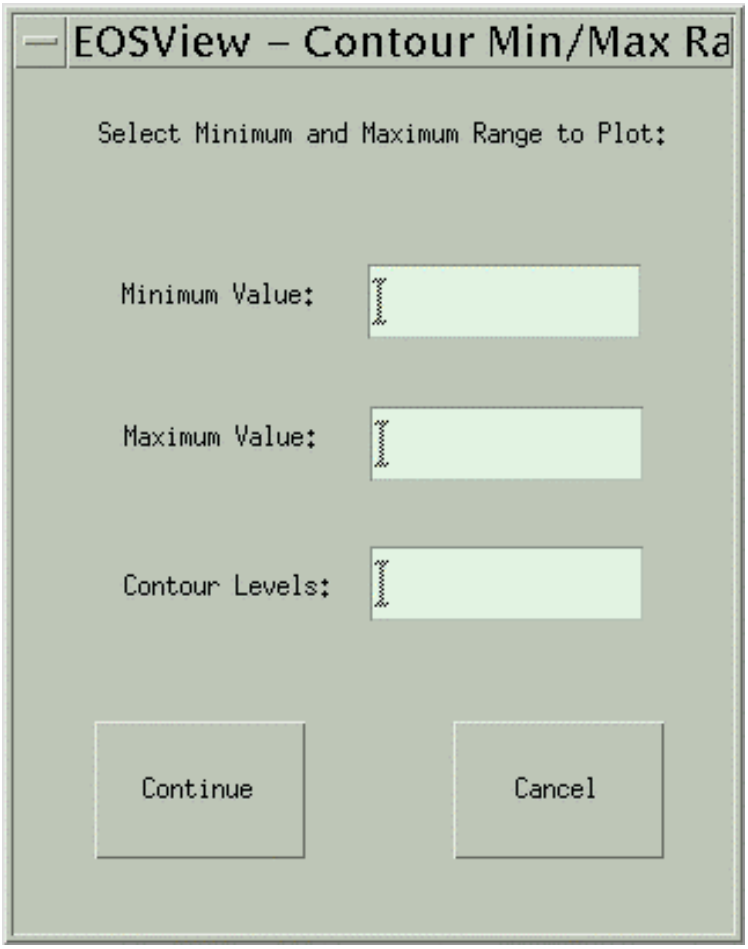

Figure 4.12.5-10. Contour/Surface Min/Max Range Pop-up

The EOSView Statistics Pop-up window (Figure 4.12.5-11) can be brought up as a selected option from the file menu list. The EOSView Statistics Pop-up window lists the minimum value, maximum value and average value in a table. The data in the table window is raw data. For a table created from an SDS, the values are taken from the entire table. For a table from a Vdata, the values are taken from each column. No statistics are calculated for character data. To close this window press the **OK** button.

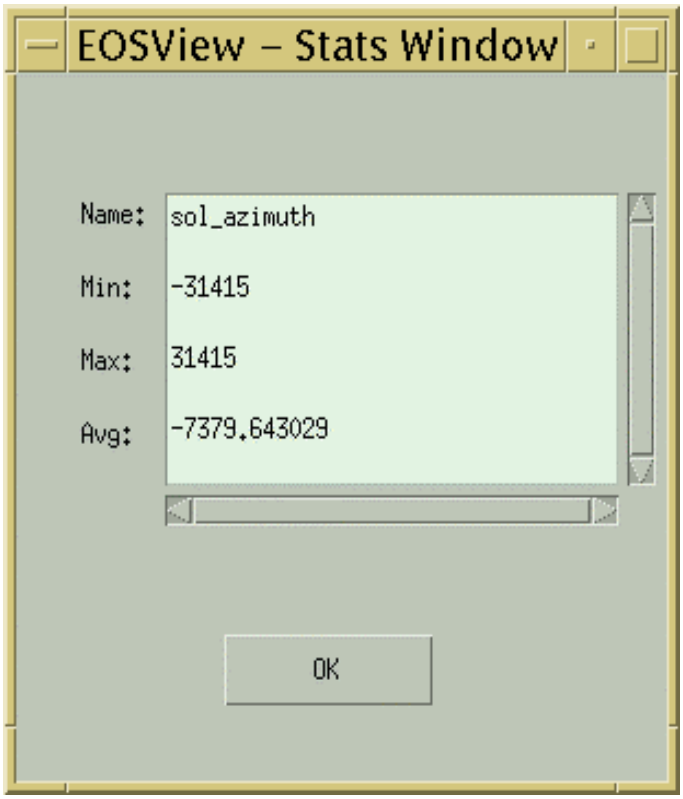

Figure 4.12.5-11. EOSView Stats Pop-up

4.12.5.2.5 Jump To Dialog

The user can jump to a specific row number in a table by selecting the **Jump To…** option. Selecting this option causes the Jump To Dialog (Figure 4.12.5-12) to appear. This dialog accepts integer input in the range listed in the text field preceded with "Enter row number…" Pressing the "OK" button causes the table to jump to the selected row number. Pressing the "Cancel" button closes the Jump To Dialog, without performing a save.

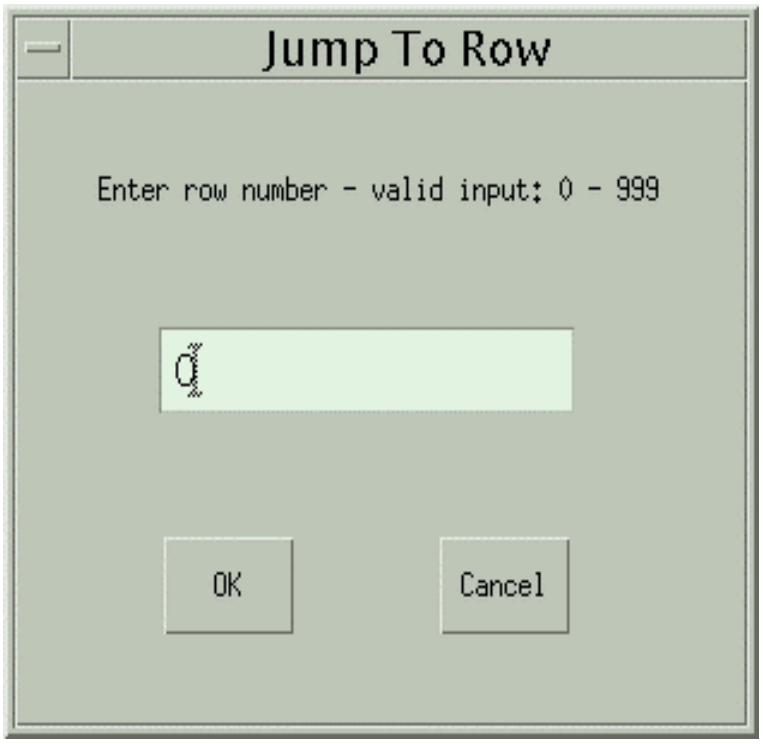

Figure 4.12.5-12. Jump To Dialog

4.12.5.2.6 Save Dialog

The user can save a table in EOSView in one of two ways. The table can be saved in either an ASCII format or it can be saved as a binary file. Selecting the save option causes the Save Dialog to appear as shown in Figure 4.12.5-13. The user can then enter the file name desired to save the table into. EOSView only saves the table to a new file. The EOSView table save mechanism saves to the HDF ASCII Interchange Format (HAIF).

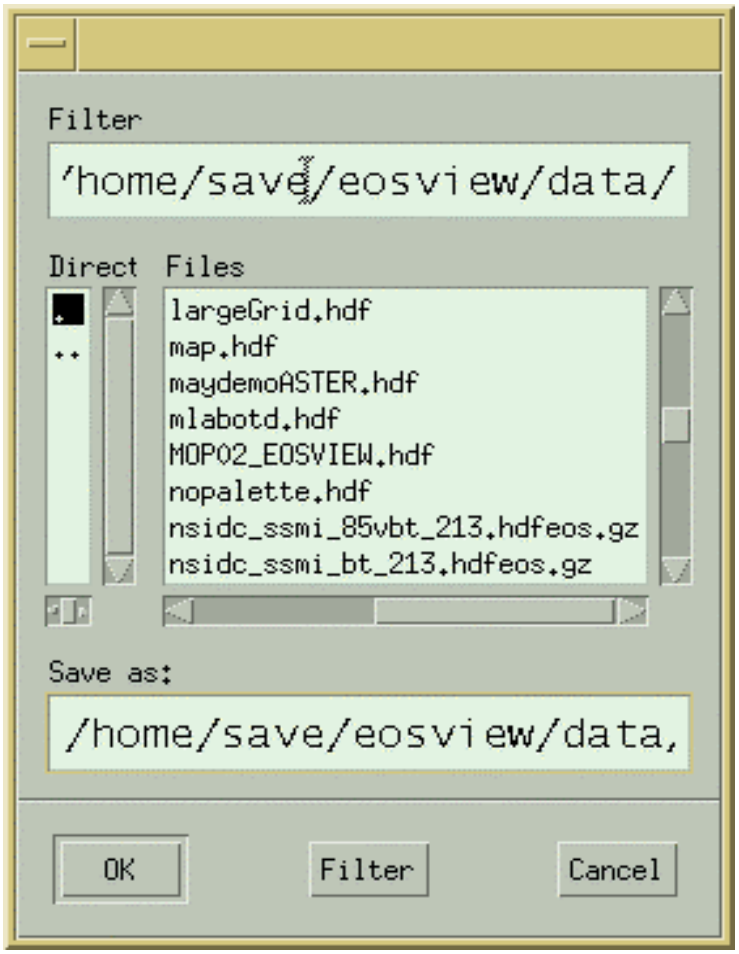

Figure 4.12.5-13. File Save Dialog

Table 4.12.5-4 describes the File Save fields.

Table 4.12.5-4. EOSView File Save Field Description

Field Name	Data Type	Size	Entry	Description
Filter	System generated (can be edited)	Unlimited	Required	Displays file selection parameters to filter the directories.
Direct	Selection	Unlimited	Required	Displays a list of directories.
Files	Selection	Unlimited	Required	Displays a list of files.
Save As	System generated (can be edited)	Unlimited	Required	Displays the filename selection - user can enter to new filename in this field.

In addition, the following pushbuttons are provided:

- **OK** – saves to the specified file
- **Filter** – filters through the directories in layers until the desired directory is displayed
- **Cancel** – closes the file save dialog

4.12.5.2.7 Make Image From Table Data

A pseudo-color image can be built from the data displayed in the Table. The image can be created by selecting **File->Make Image** from the menu bar of the EOSView - Table Pop-up (see Figure 4.12.5-4). Selecting this option causes the Min/Max Values window to appear as shown in Figure 4.12.5-14. Table 4.12.5-5 describes the fields of the Min/Max Values Pop-up.

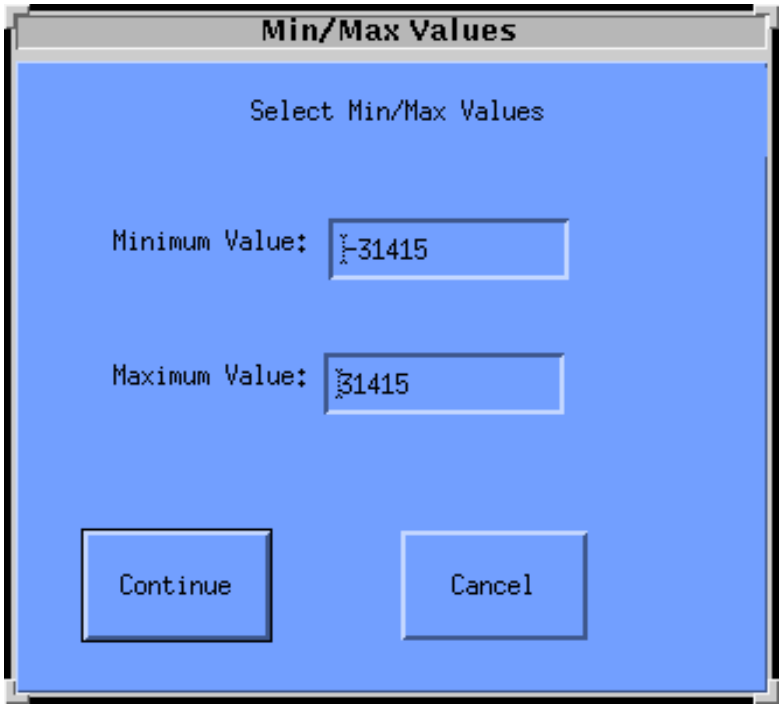

Figure 4.12.5-14. Min/Max Values Pop-up

Table 4.12.5-5. Min/Max Values Window Field Description

Field Name	Data Type	Size	Entry	Description
Minimum Value	Integer or float (depending upon original data values)	N/A	Required	Min value used for the image (field size is limited by the values that first appear when the window opens).
Maximum Value	Integer or float (depending upon original data values)	N/A	Required	Max value used for the image (field size is limited by the values that first appear when the window opens).

From the Min/Max Values Window, the operator has the opportunity to enter the minimum and maximum values used for the image. Pressing the **Continue** button causes the EOSView - Image Display Pop-up to appear (shown in Figure 4.12.5-15). The operator can cancel all actions by pressing the **Cancel** button.

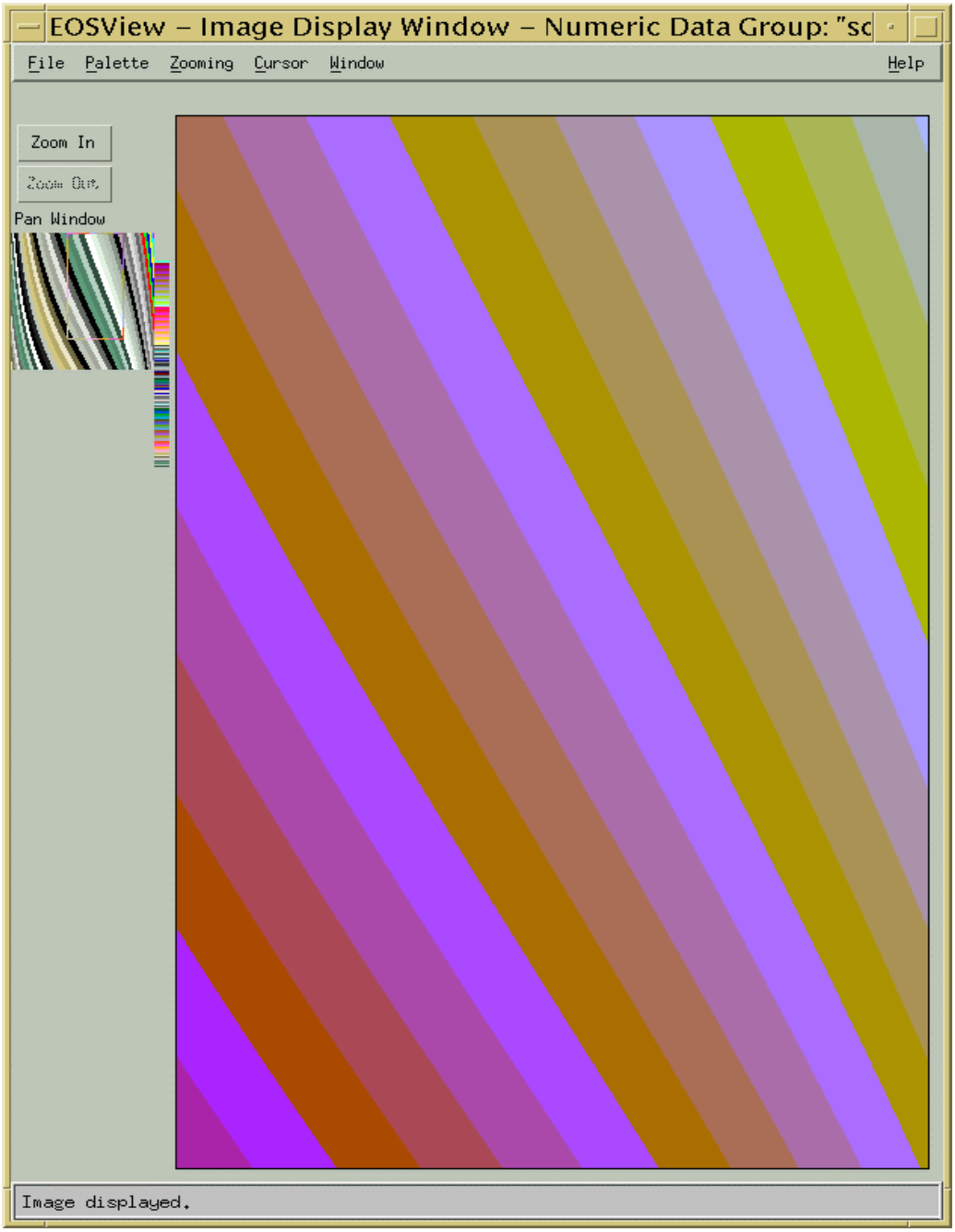

Figure 4.12.5-15. "sol_azimuth" Image Display Pop-up

4.12.5.2.8 Image Display

The Image Display pop-up has the following pulldown menu options**: File, Palette, Zooming, Cursor, Window,** and **Help**.

- The **File->Overlay** option on the menubar is active only if the image has been created from a grid table. The **Overlay** option allows the operator to have lat/lon lines drawn over the image or the operator can have an icon displayed at a point on the grid image. See Section 4.12.5.2.11 which describes the EOSView lat/lon window for symbols and cursor positioning. Selecting the Close option exits the Image Display Window
- The **Palette** pulldown menu allows the operator to select colors from the following types of palettes for comparison: Default, Greyscale, Antarctica, Rainbow, and World Colors. The first palette option is "Default" which is the palette provided within the HDF file of the image being displayed; if no palette was provided, the default color map is used. The second palette option is "Grayscale" which is a black and white version of the image being displayed. The next three options are "Antarctica", "Rainbow" and "World Colors." These three palettes are provided as part of EOSView. Selecting one of these three palettes causes the current image to use that palette. The "Use Entire Palette" option is not functional
- The **Zooming** pulldown menu allows the operator to select from two zoom methods: Bilinear Interpolation and Nearest Neighbor. Bilinear Interpolation uses interpolation to calculate the probable color during an expansion/compression event; it gives a much smoother image during zooming. The second is Nearest Neighbor which uses sub-sampling or super sampling to determine probable color, e.g., two red pixels are now four red pixels during expansion
- The **Cursor** pulldown menu allows the operator to set the cursor at a specified position. The first is "X-Y Position" . The operator is prompted for an X-Y location and the cursor is positioned at that location. In EOSView, position 0,0 is the lower left corner (see Section 4.12.5.2.12, which describes the EOSView - X-Y Cursor window). If the image has been created from a grid table, the operator can enter a lat/lon position and the cursor is positioned to that location. See Section 4.12.5.2.11 which describes the "EOSView - lat/lon window (used for symbols and cursor positioning). If the image has been created from a swath table, the operator can position the cursor at the selected scan line. The cursor is placed at the beginning of the scanline. See Section 4.12.5.2.13 which describes the EOSView Scanline Cursor Window
- The **Window** option lists in a pull-down menu all windows which are currently open. See Section 4.12.5.2.23 "Window Pulldown Menu"
- **Help** – see Section 4.12.5.2.25 "Help Pulldown Menu"

The Image Display also has the following pushbuttons: Zoom In and Zoom Out. It also has a panning feature as described below.

- **Zoom In** and **Zoom Out** pushbuttons -- pressing the Zoom In button causes the image to be zoomed in and re-drawn in the image window. Pressing the Zoom Out button causes the image to be zoomed out until it returns to original size. The zoom factor is displayed in the bottom left corner of the EOSView - Image Display Window on the status bar

- **Pan Window** -- If the operator has zoomed in on an image, the operator can pan around the image by holding down the left mouse button while the cursor is in the postage stamp size image and moving it around. The cursor is outlined by a box which indicates the portion of the image being displayed in the full size image window

The Image Display Pop-up also has cursor tracking capabilities. Placing the cursor on the image and holding the left mouse button causes the cursor position (in x-y coordinates) to be displayed on the right side of the status bar. If the image has been created from a grid table the cursor position is displayed in lat/lon coordinates on the right side of the status bar.

4.12.5.2.9 Lat/Lon Symbol Pop-up

The EOSView Lat/Lon Symbol/Cursor pop-up (Figure 4.12.5-16) allows the operator to enter the desired coordinate pair in one of two ways. Degrees-minutes-seconds (DMS radio button) allows the operator to type in the degrees (Deg), minutes (Min), and seconds (Sec) for the latitude and the longitude. The second method is by entering degrees (DEG radio button) in the degrees text fields. In either case the operator can switch between North (N), South (S), and East (E), West (W) by using the list buttons to the right of the text entry fields. For both entry methods, hitting the "Ok" button causes the cursor to be positioned or a symbol drawn at the desired location. Hitting the "Cancel" button cancels the operation.

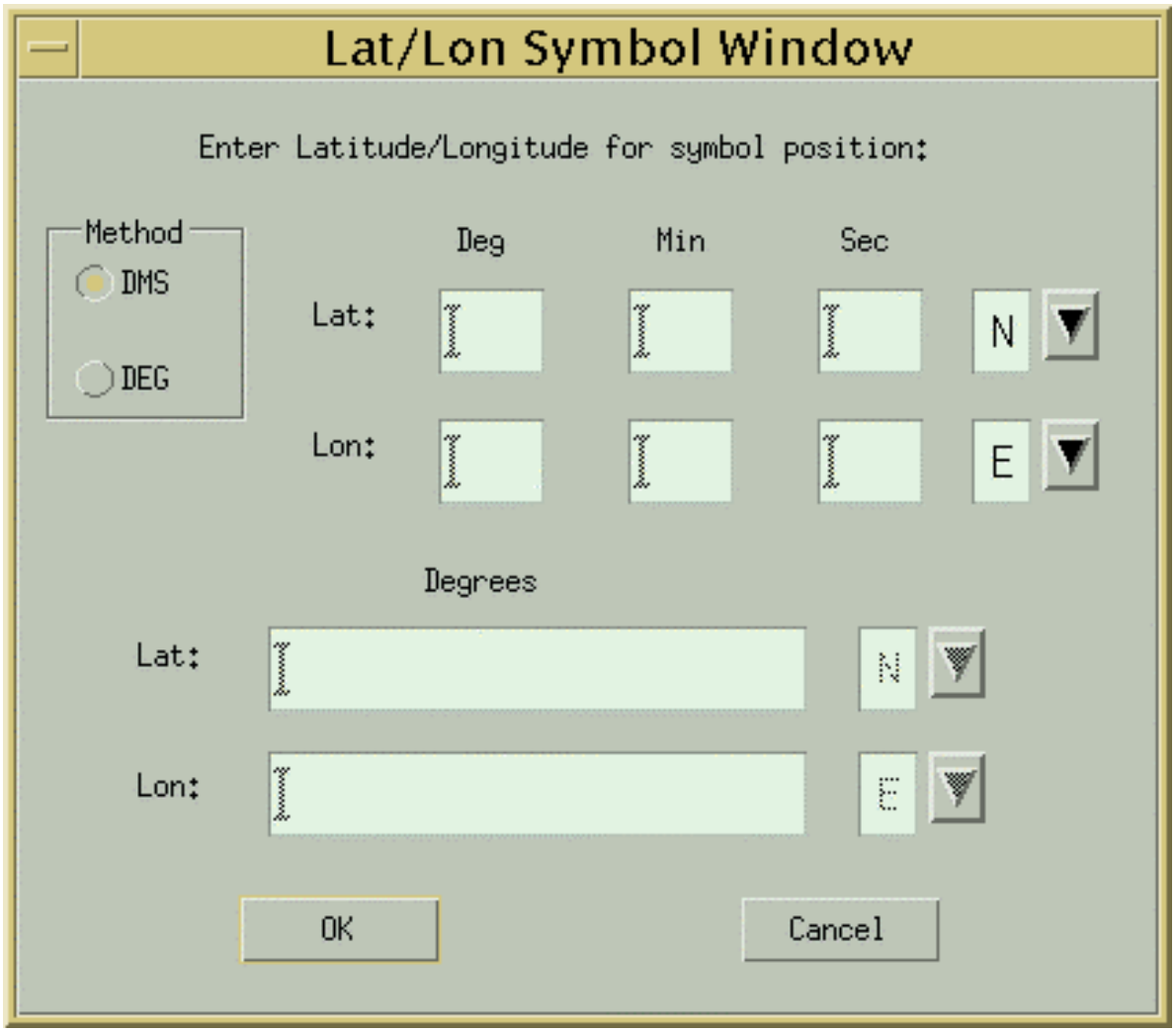

Figure 4.12.5-16. Lat/Lon Symbol Pop-up

Table 4.12.5-6 describes the parameters in the Lat/Lon Symbol Window.

Table 4.12.5-6. Lat/Lon Symbol Window Field Description

Field Name	Data Type	Size	Entry	Description
Lat (DMS)	Float	N/A	Required	Latitude (if DEG is selected).
Lon (DMS	Float	N/A	Required	Longitude (if DEG is selected).
Lat/Lon (Deg)	Float	N/A	Required	Degrees of Latitude/Longitude (if DMS or DEG is selected).
Lat/Lon(Min)	Float	N/A	Required	Minutes of Latitude/Longitude (if DMS is selected).
Lat/Lon(Sec)	Float	N/A	Required	Seconds of Latitude/Longitude (if DMS is selected).

4.12.5.2.10 X-Y Cursor Window

Upon selection of **Cursor->Location->x-y position** in the image display window, the XY Cursor window appears as shown in Figure 4.12.5-17. The operator can enter the X-Y coordinates to have the cursor positioned by using the EOSView X-Y Cursor Pop-up. The operator can enter the desired X-Y location in the corresponding X-Y text field. The X-Y limits are placed to the right of the text fields. Hitting the "Ok" button causes the cursor to be placed at the desired location in the image. Hitting the "Cancel" button cancels the operation.

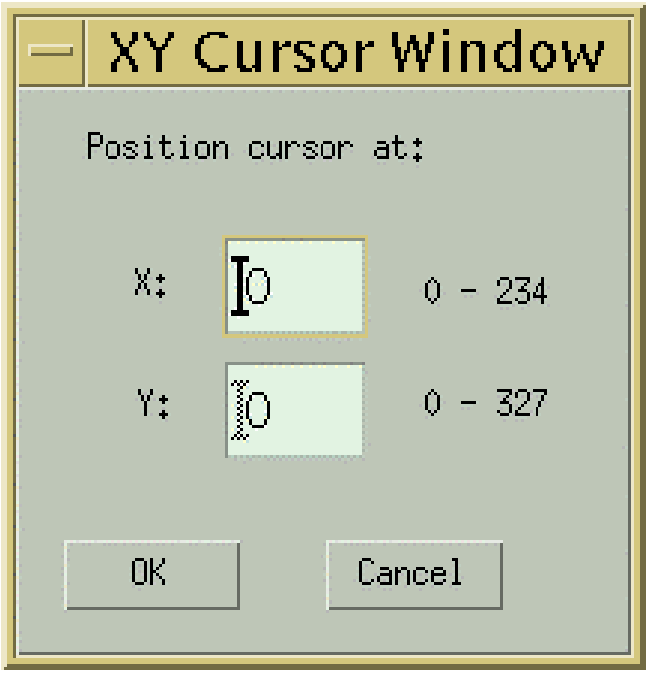

Figure 4.12.5-17. X-Y Cursor Pop-up

Table 4.12.5-7 describes the parameters in the X-Y Cursor Pop-up.

Table 4.12.5-7. X-Y Cursor Window Field Description

Field Name	Data Type	Size	Entry	Description
X:	Integer	N/A	Required	X horizontal coordinate (minimum and maximum accepted values are listed to the right of the text field).
Y:	Integer	N/A	Required	Y vertical coordinate (minimum and maximum accepted values are listed to the right of the text field).

4.12.5.2.11 ScanLine Cursor Window

If the image was created from a Swath table the operator can position the cursor to the beginning of the scanline by using the EOSView - ScanLine Cursor Pop-up (Figure 4.12.5-18). Moving the slider left and right causes the scanline value below the slider to decrease and increase, respectively. Once the desired scanline is achieved, hitting the "Ok" button causes the cursor to be placed at the beginning of the scanline. Hitting the "Cancel" button cancels the operation.

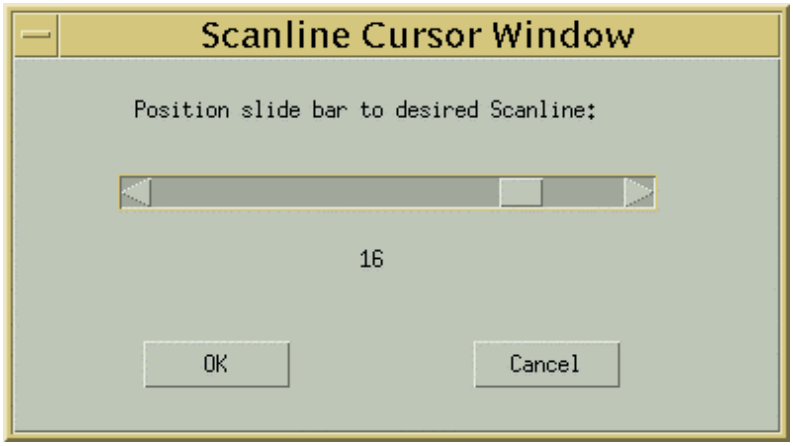

Figure 4.12.5-18. Scanline Cursor Pop-up

4.12.5.2.12 Vdata

In this example, the packVdata1.hdf file was selected from the File Selection dialog, bringing up the Vdata File Contents Pop-up (see Figure 4.12.5-19).

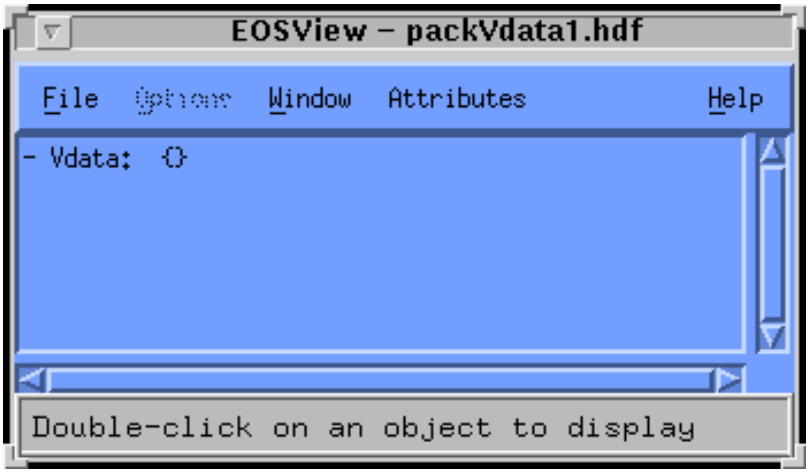

Figure 4.12.5-19. File Contents Pop-up Containing Vdata

Double-clicking on the Vdata entry brings up the "EOSView - VData Field Select" pop-up (shown in Figure 4.12.5-20). This window lists all the field names in the selected Vdata. The operator can select one or more fields for display. If the fields contain multiple values for a field then the field appears in its own table.

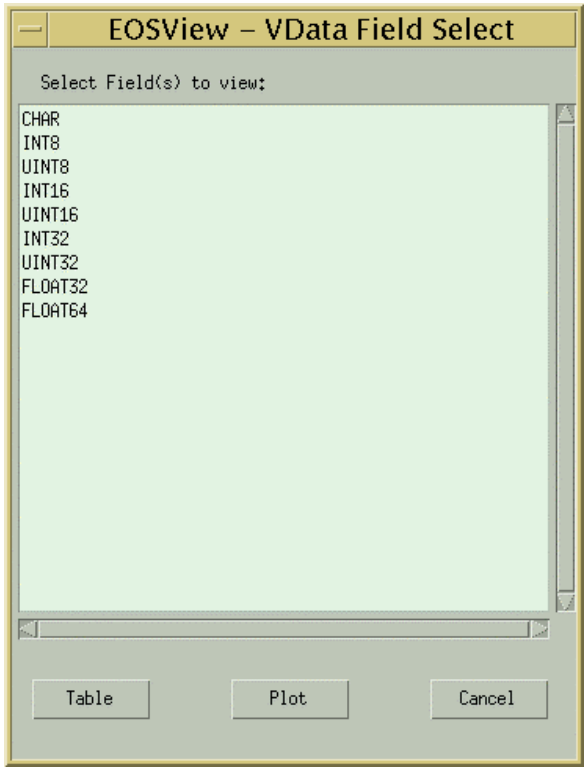

Figure 4.12.5-20. EOSView - Vdata Field Select Pop-up

Table button - Once the operator has selected the fields desired, pressing the table button causes the Vdata to appear in a table (see Figure 4.12.5-21).

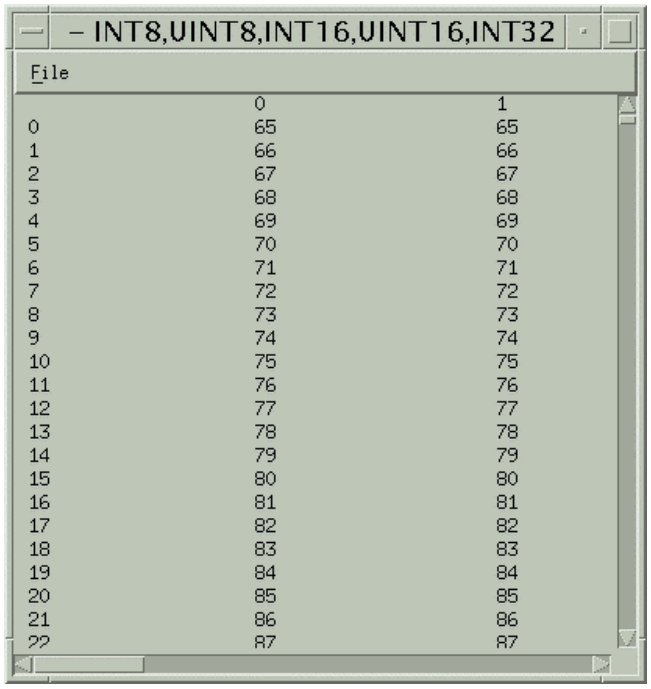

Figure 4.12.5-21. Table Containing Vdata Field Pop-up

Plot button - The operator can select one or two non-character data fields and have the data plotted by pressing the plot button (see Figure 4.12.5-22).
Cancel button - Cancels all actions.

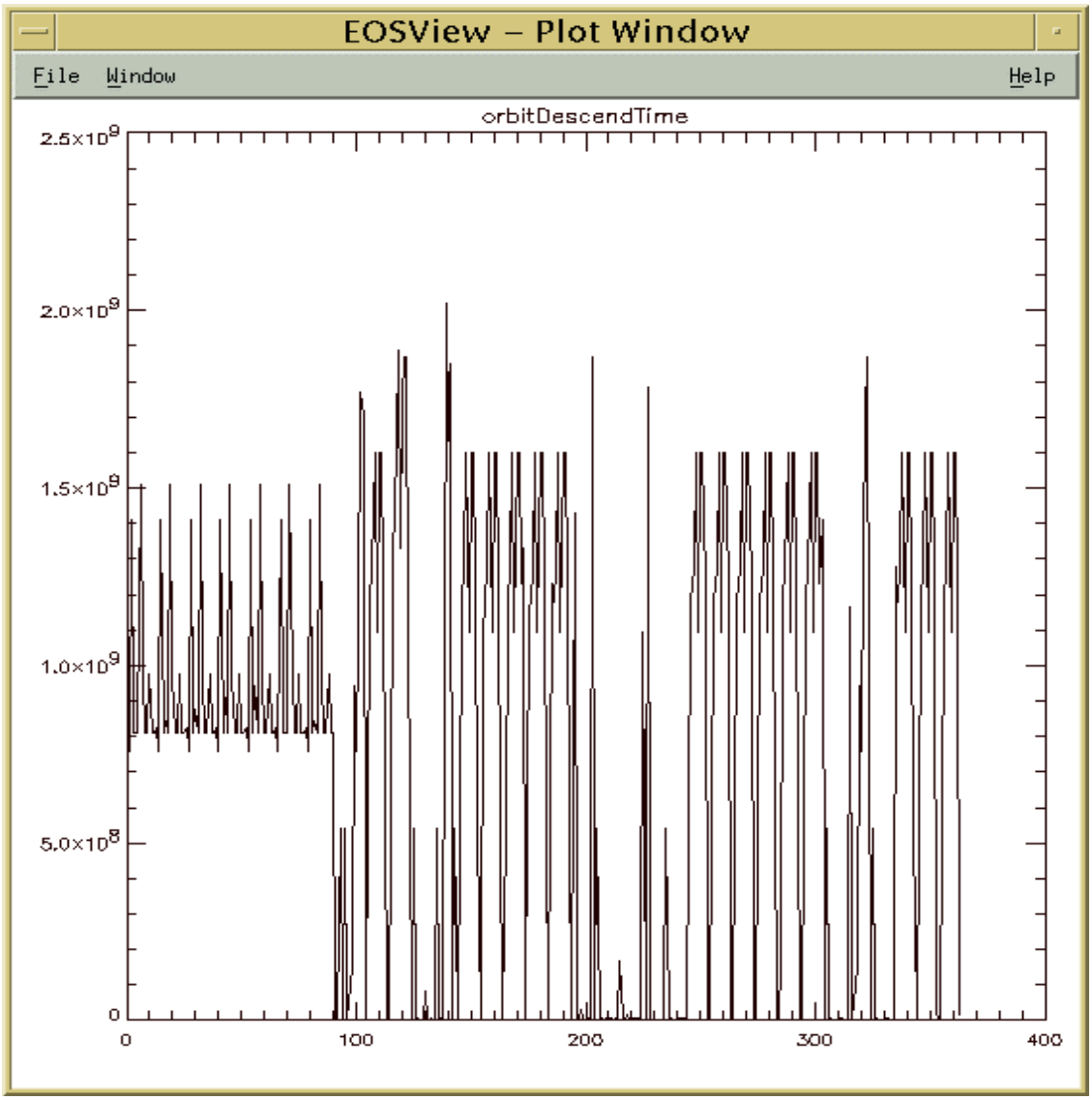

Figure 4.12.5-22. Plot Pop-up

The Plot Pop-up created from the Vdata Field Select window contains the following menu options:

- The **File** options allows the user to close the window by selecting **Close**
- The **Window** option lists in a pull-down menu all windows which are currently open. See Section 4.12.5.2.23 "Window Pulldown Menu"

4.12.5.2.13 VGroup

If the object in the File Contents Display Window is a **Vgroup,** the contents of the VGroup are added to the list and the list is re-drawn in the list box. Clicking on a VGroup that has already had the contents expanded causes the contents of the VGroup to disappear and the list is re-

drawn in the list box. Figure 4.12.5-23 shows several expanded an unexpanded Vgroup categories.

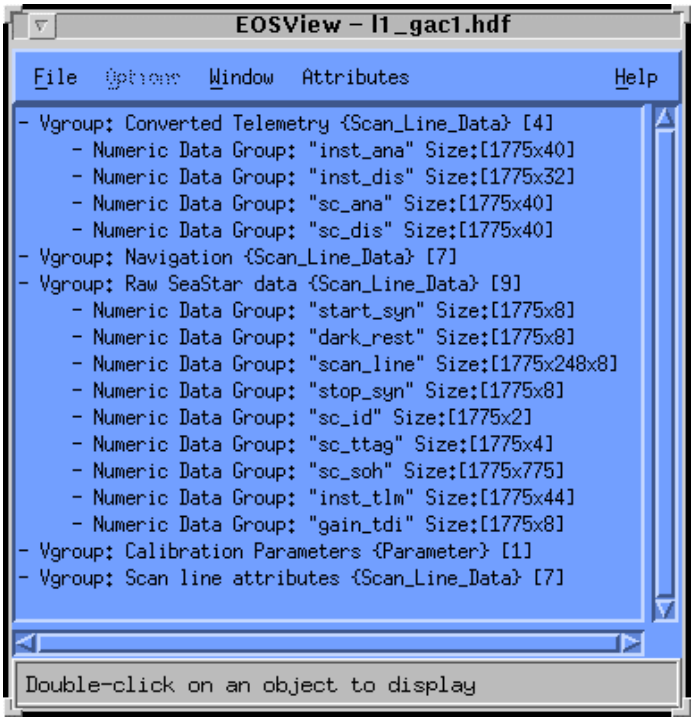

Figure 4.12.5-23. File Contents Pop-up Containing Vgroups

4.12.5.2.14 Raster Image

In this example, the alltovs.hdf file was selected from the File Selection dialog, bringing up the File Contents Display Window shown in Figure 4.12.5-24.

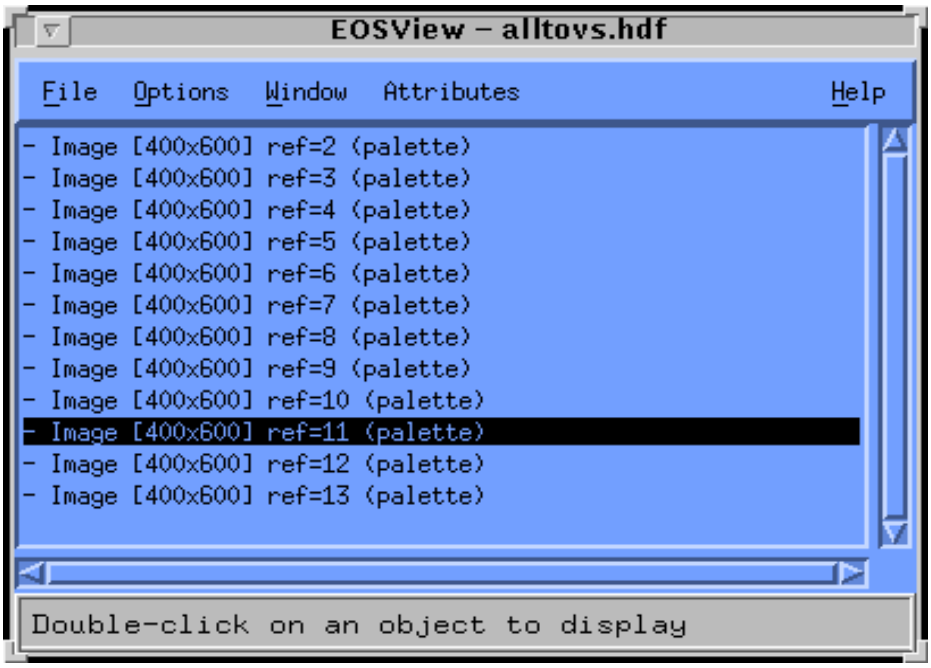

Figure 4.12.5-24. File Contents Pop-up Containing Raster Images

Clicking on a Raster Image Group causes the image to be drawn in an EOSView - Image Display Pop-up (see Figure 4.12.5-25).

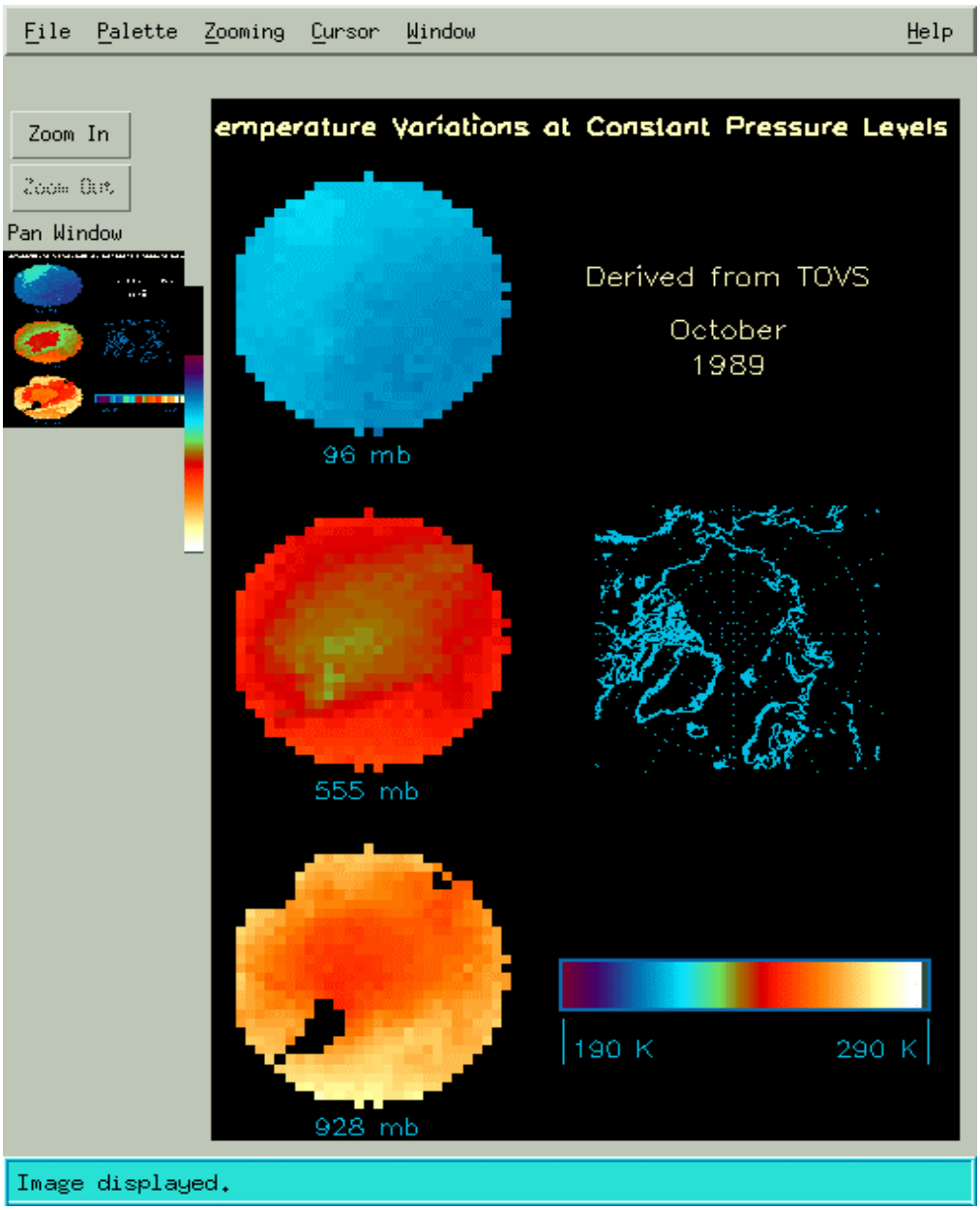

Figure 4.12.5-25. Raster Image Pop-up

A Raster image is different than the pseudo-color image shown in Section 4.12.5.2.9 since this image is not drawn from data. It is simply a visual depiction of an object. The menus and pushbuttons for this window are the same as those described for the pseudo-color display. See Section 4.12.5.2.10 for a description of the Image Display Window.

4.12.5.2.15 EOSView Grid Select GUI

In this example, the GridFile.hdf was selected from the File Selection dialog, bringing up the GridFile.hdf File Contents Display shown in Figure 4.12.5-26.

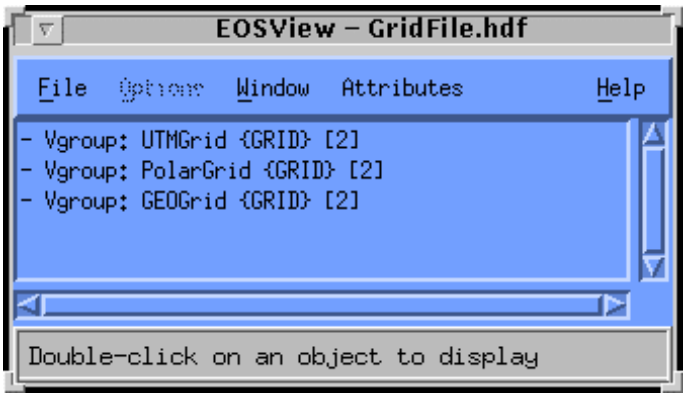

Figure 4.12.5-26. Grid File Contents Display Pop-up

Double-clicking on a selection (in this case, the object *Vgroup: UTMGrid {GRID} [2]* was selected) brings up the Grid Select Pop-up shown in Figure 4.12.5-27.

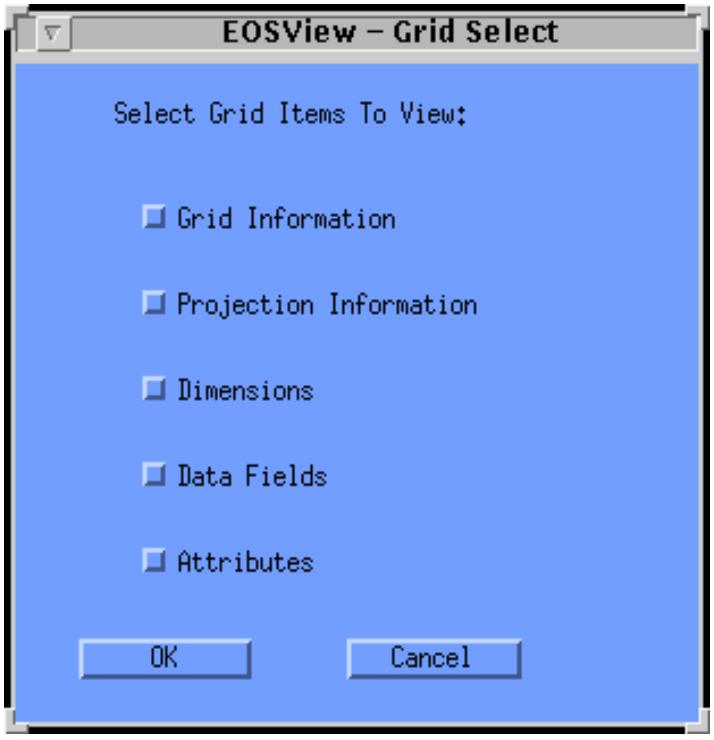

Figure 4.12.5-27. Grid Select Pop-up

All of the following options are available for selection: Grid Information, Projection Information, Dimensions, Data Fields, and Attributes. Selecting **OK** brings up windows for all the items selected. Clicking on **Cancel** returns the operator to the File Contents Window. Assuming all the items have been selected, the following windows appear:

Grid Information

To view a summary of a selected Grid object, click on the Grid Information checkbox. The Grid Information dialog pop-up (shown in Figure 4.12.5-28) displays information about the selected grid such as X-Dimension value, Y-Dimension value, Upper Left Point values, and Lower Right Point values.

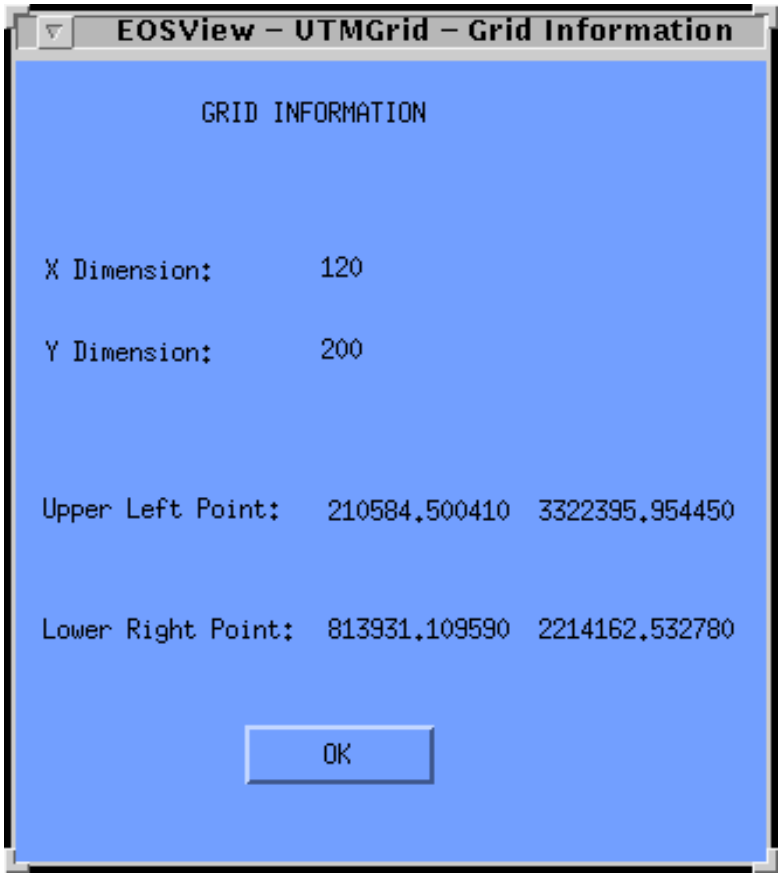

Figure 4.12.5-28. Grid Information Pop-up

This window can be closed by pressing the **OK** button.

Projection Information

To view the Projection Information of the selected Grid object, click on the Projection Information checkbox in the EOSView - Grid Select window and press the **OK** button. This causes the EOSView - Grid Projection Information pop-up shown in Figure 4.12.5-29 to appear.

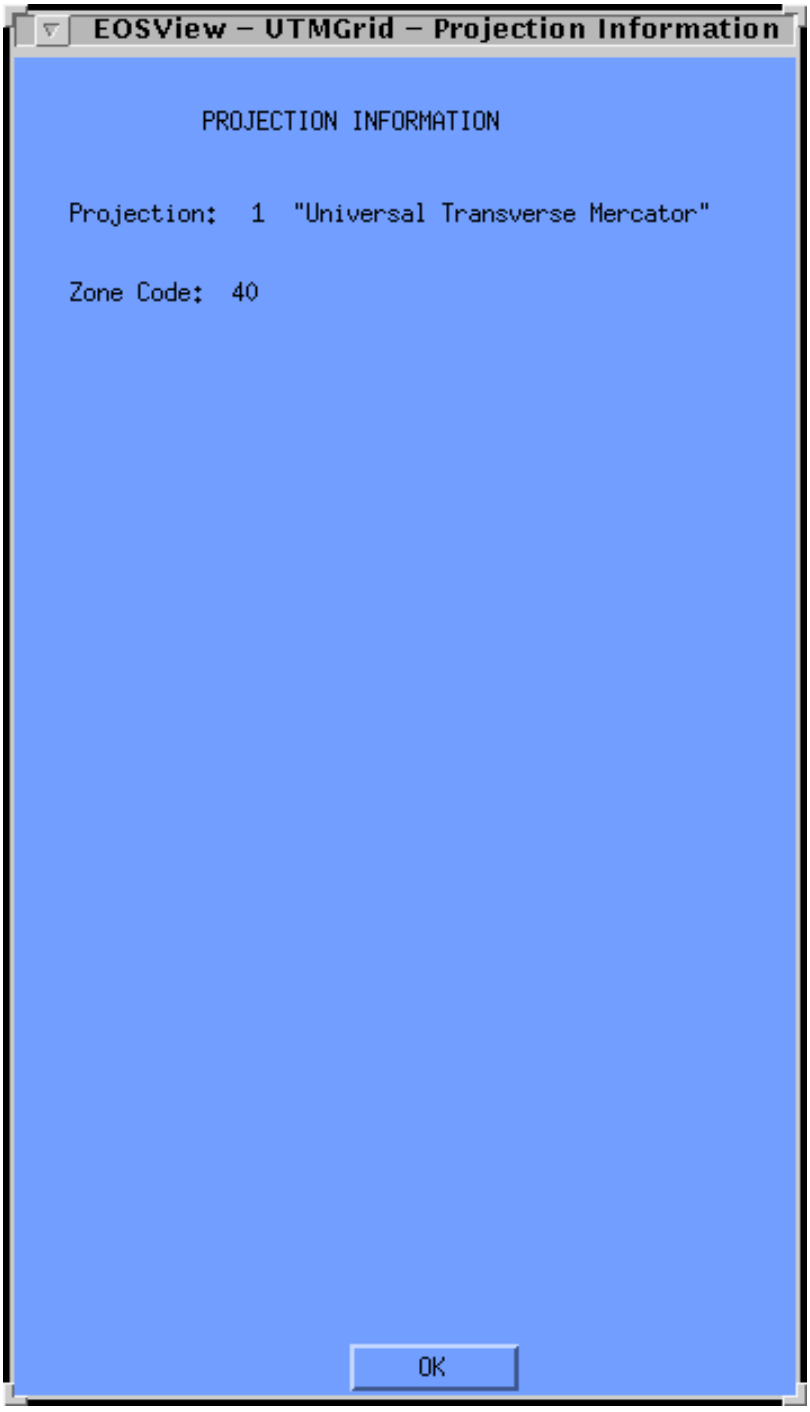

Figure 4.12.5-29. Projection Information Pop-up

The **Projection Information** pop-up displays information about the projection of the selected grid in a dialog box. The first item displayed is the Projection itself. If the projection is Universal Transverse Mercator, the next item is displayed in the Zone Code. For any other projection the

next items displayed are the thirteen (13) Projection Parameters. This window can be closed by pressing the **OK** button.

Dimensions

To view the dimensions of the selected Grid object, click on the Dimensions checkbox in the EOSView - Grid Select pop-up and press the **OK** button. This causes the EOSView - Grid Dimensions window (shown in Figure 4.12.5-30) to appear.

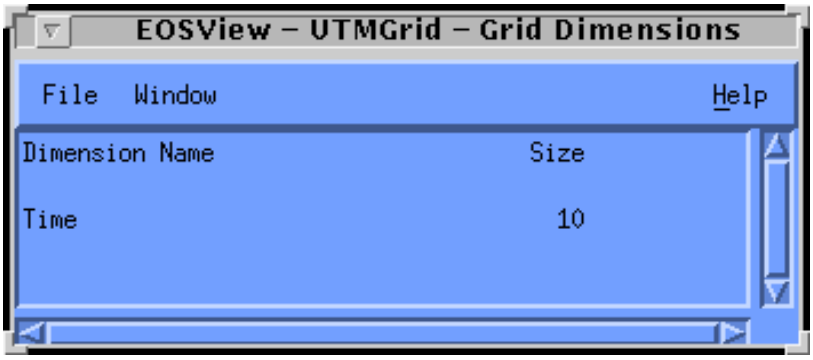

Figure 4.12.5-30. Grid Dimensions Pop-up

This window lists Dimension Names and Sizes for the selected Grid in table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

Data Fields

To view the Data Fields of the selected Grid object simply click on the Data Fields checkbox in the EOSView - Grid Select pop-up and press the **OK** button. This causes the EOSView - Grid Data Fields window (shown in Figure 4.12.5-31) to appear. See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

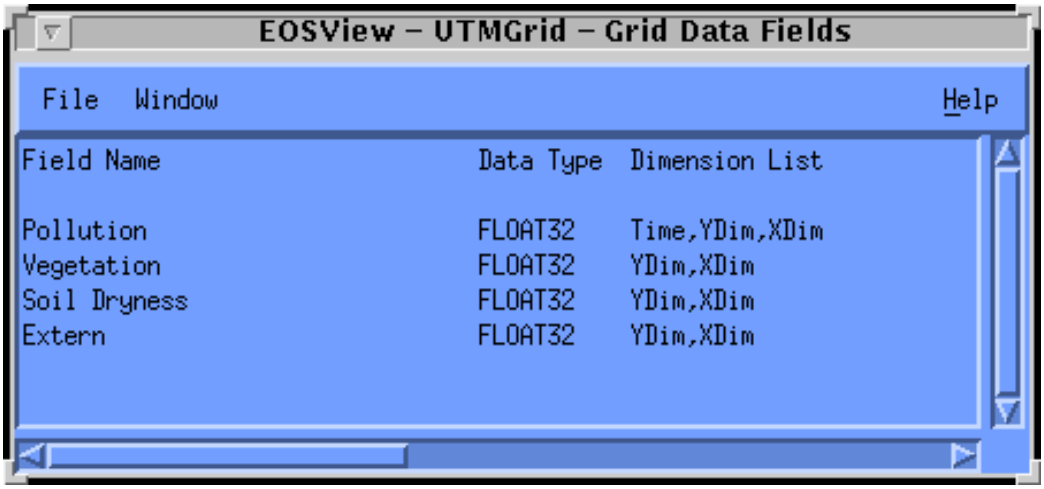

Figure 4.12.5-31. Grid Data Fields Pop-up

To view a slice of the Grid Geolocation/Data Field data, move the pointer over the object and double click the left mouse button. This causes the EOSView - Start/Stride/Edge pop-up (shown in Figure 4.12.5-32) to appear.

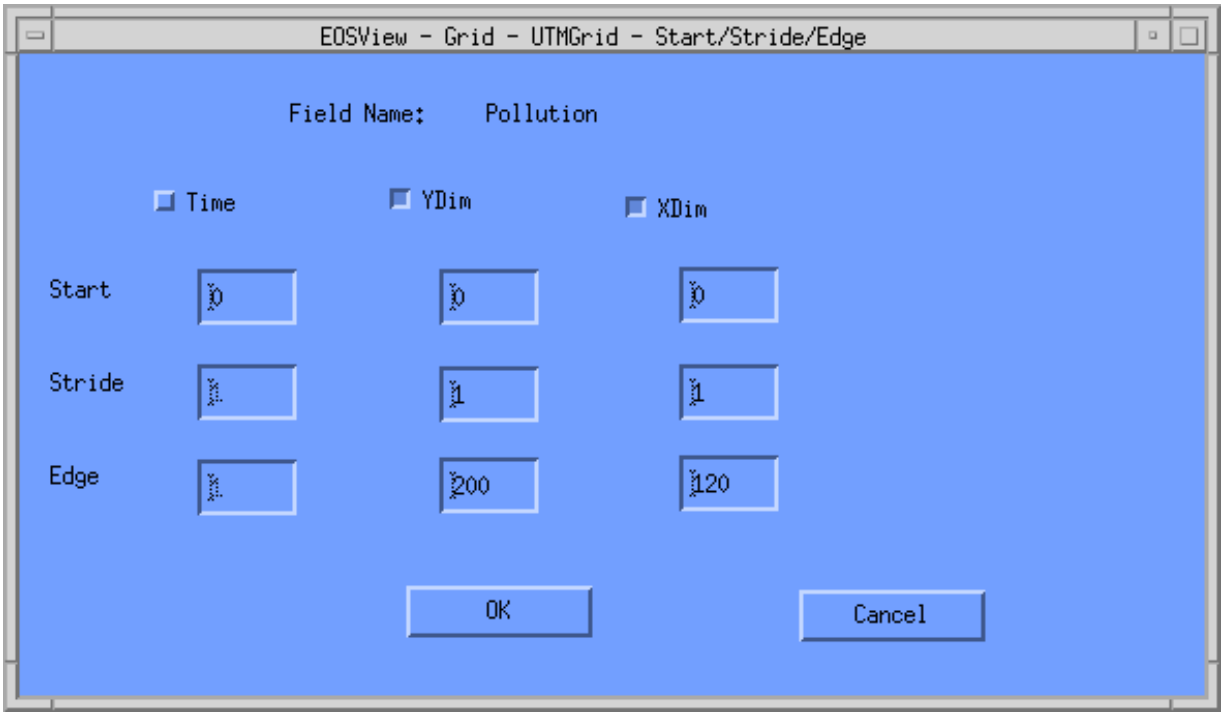

Figure 4.12.5-32. Start/Stride/Edge Pop-up

Table 4.12.5-8 describes the **Start/Stride/Edge** pop-up fields.

Table 4.12.5-8. Start/Stride/Edge Pop-up Field Description

Field Name	Data Type	Size	Entry	Description
Start	Integer	N/A	Required	Start for grid geolocation/data field data.
Stride	Integer	N/A	Required	Stride for grid geolocation/data field data.
Edge	Integer	N/A	Required	Edge for grid geolocation/data field data.

This pop-up displays the Start, Stride, and Edge values for each dimension (there can be up to eight). The start value for each dimension can be edited but the stride and edge values can only be edited for the selected dimensions. This is a way of subsampling the data desired. A dimension can be selected by clicking on the check box next to the dimension name. A maximum of two dimensions can be selected. Once the operator has entered the desired data the **OK** button can be pressed and the selected dimension data are displayed in the EOSView - Grid Table. For more information on a Table, building a pseudo-color image, and the Min/Max Values Pop-up, see Section 4.12.5.2.9. The operator can cancel all actions by pressing the **Cancel** button.

Note: if an input error occurs, a warning dialog (Figure 4.12.5-33) appears, displaying the dimension name in error and a size total. The operator must meet the criteria in the formula displayed in the warning dialog. Click OK to return to the Start/Stride/Edge Window to re-enter the correct values.

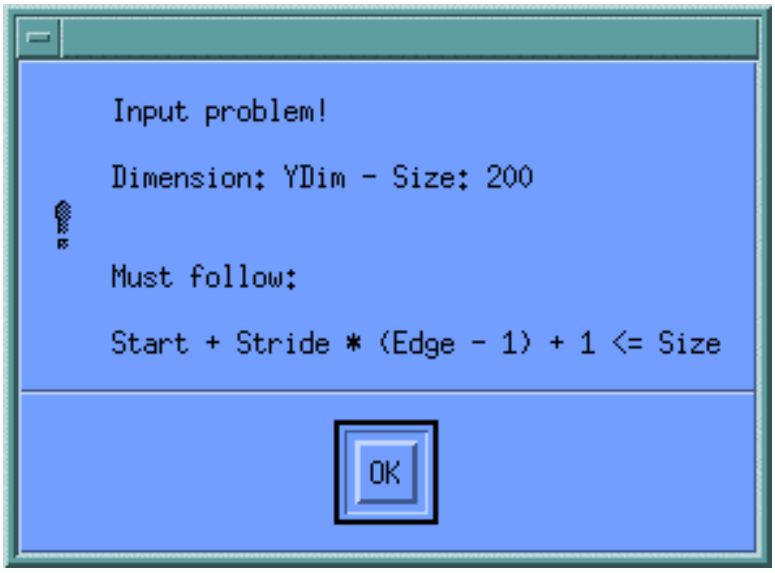

Figure 4.12.5-33. Warning Dialog

Attributes

Clicking on the Attributes checkbox in the EOSView Grid Select Pop-up brings up the Attributes Text Display shown in Figure 4.12.5-34.

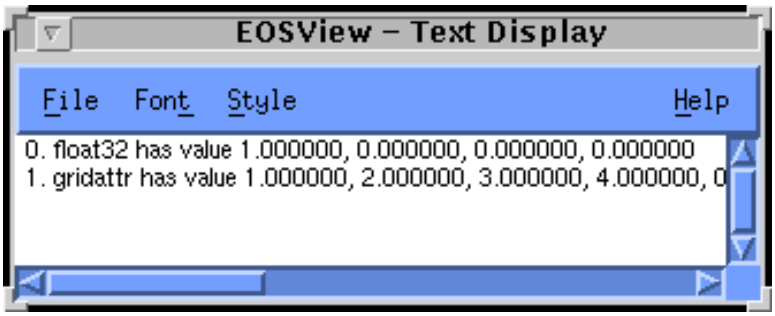

Figure 4.12.5-34. Attributes Text Display Pop-up

This display shows the attributes associated with a particular dataset. The text display can be closed from the **File** pulldown menu, the text can be modified using the **Font** and **Style** pulldown menus, and additional help can be obtained from the **Help** pulldown menu (see Section 4.12.5.2.25 "Help Pulldown Menu.")

4.12.5.2.16 EOSView SwathFile Select

In this example, the SwathFile.hdf file was selected from the File Selection dialog, bringing up the File Contents Pop-up shown in Figure 4.12.5-35.

Figure 4.12.5-35. SwathFile Select Pop-up

Double clicking on an item in the File Select window brings up the Swath Select Pop-up shown in Figure 4.12.5-36.

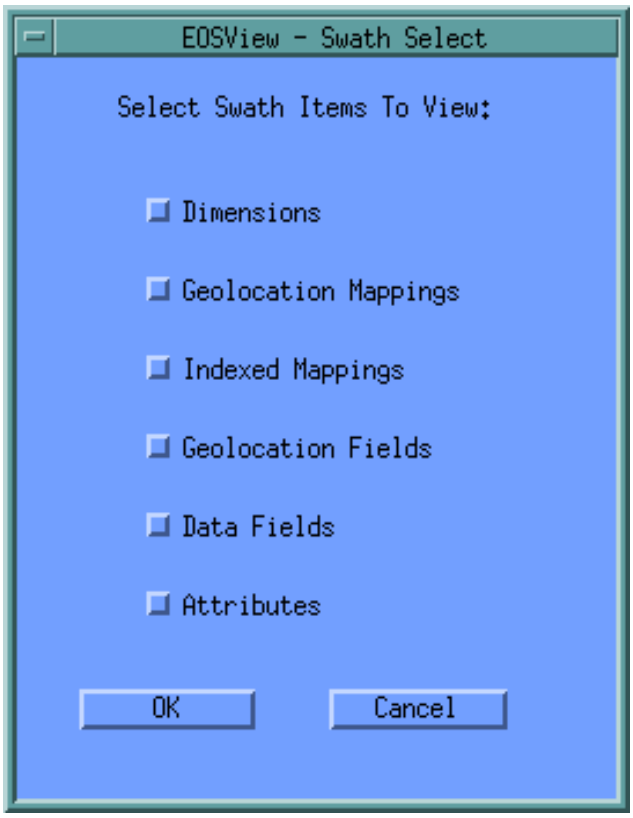

Figure 4.12.5-36. Swath Select Pop-up

As many options as desired can be selected from the following list: Dimensions, Geolocation Mappings, Indexed Mappings, Geolocation Fields, Data Fields, and Attributes. Selecting OK brings up windows for all the items selected. Clicking on Cancel closes the Swath Selection Pop-up with no action being taken. Assuming all the items have been selected, the following windows appear.

Dimensions

To view the dimensions of the selected Swath object, click on the Dimensions checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Dimensions pop-up to appear. This window lists the Dimension Names and Sizes for the selected Swath in a table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. This window is similar to the Grid file dimensions window described in Section 4.12.5.2.17 “EOSView Grid Select GUI” (see Dimensions).

Geolocation Mappings

To view the Geolocation Mappings of the selected Swath object, click on the Geolocation Mappings checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Geolocation Mappings window (shown in Figure 4.12.5-37) to appear.

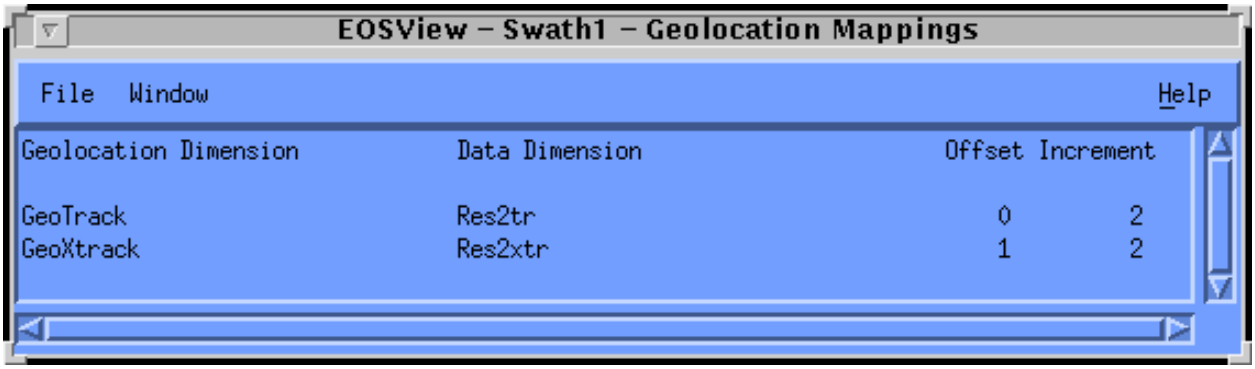

Figure 4.12.5-37. Geolocation Mappings Pop-up

This window lists the Geolocation Dimensions, Data Dimensions, Offsets, and Increments for the selected Swath in a table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

Indexed Mappings

To view the Indexed Mappings of the selected Swath object, click on the Indexed Mappings checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Indexed Mappings pop-up (shown in Figure 4.12.5-38) to appear.

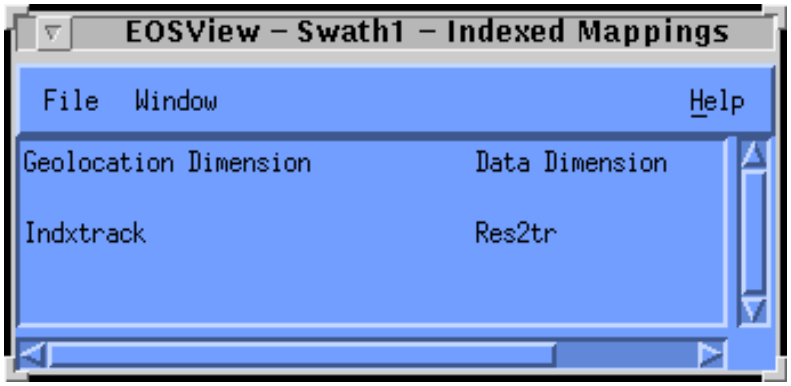

Figure 4.12.5-38. Indexed Mappings Pop-up

Viewing the size of the mapping can be performed by moving the pointer over the object and double clicking the left mouse button. This causes the EOSView - Indexed Mapping Sizes pop-up (shown in Figure 4.12.5-39) to appear. See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

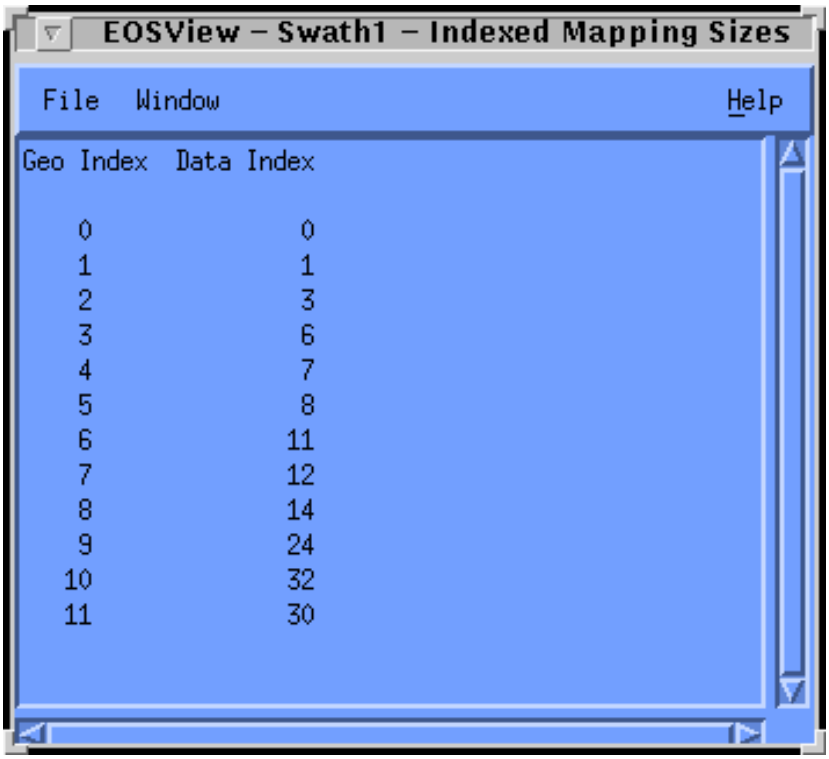

Figure 4.12.5-39. Index Mapping Sizes Pop-up

This window lists the Geolocation Indices and Data Indices for the selected Swath in a table form in a scrollable window. The items listed are non-selectable and are for display/verification purposes only. The window can be closed by selecting "Close" from the File menu. See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

Geolocation Fields

To view the Geolocation Fields of the selected Swath object, click on the Geolocation Fields checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Geolocation Fields window (shown in Figure 4.12.5-40) to appear.

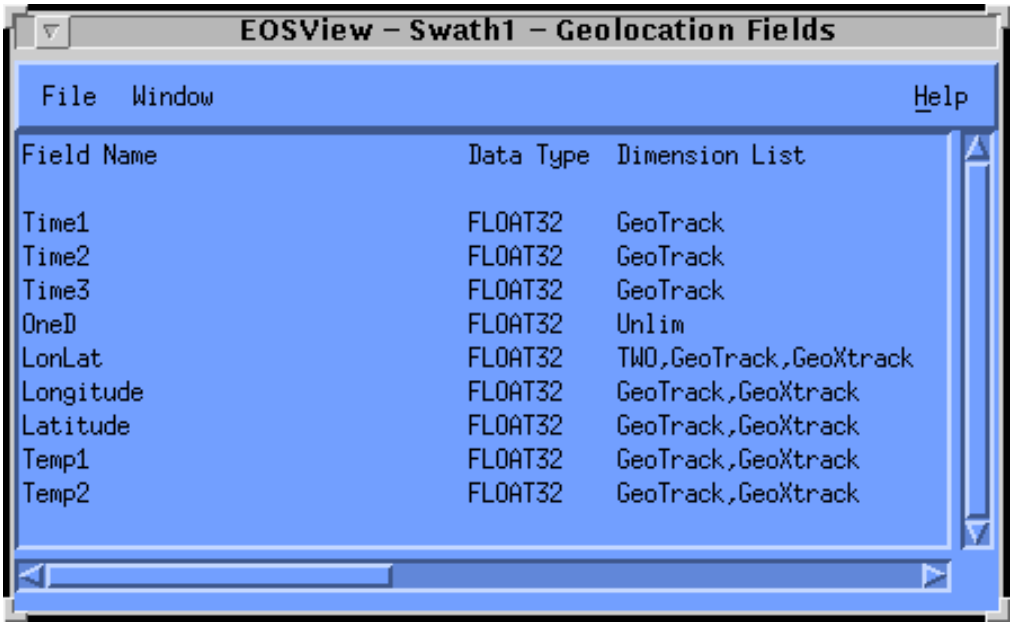

Figure 4.12.5-40. Geolocation Fields Pop-up

Selecting a Swath Geolocation to view a slice of the data can be performed by moving the pointer over the object and double clicking the left mouse button. This causes the EOSView - Start/Stride/Edge pop-up to appear. This window lists the Start, Stride, and Edge values for each dimension listed. This window is similar to the Grid file Start/Stride/Edge window described in Section 4.12.5.2.17 "EOSView Grid Select GUI" (see Data Fields). See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

Data Fields

To view the Data Fields of the selected Swath object, click on the Data Fields checkbox in the EOSView - Swath Select pop-up and press the OK button. This causes the EOSView - Swath Data Fields pop-up to appear. This window is similar to the Grid file data fields window described in Section 4.12.5.2.17 "EOSView Grid Select GUI" (see Data Fields). See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

Attributes

To view the attributes of the selected Swath object, click on the Attributes checkbox in the EOSView - Swath Select window and press the OK button. This window is similar to the Grid file attributes pop-up described in Section 4.12.5.2.17 "EOSView Grid Select GUI " (see Attributes).

4.12.5.2.17 Point Files

In this example, selecting PointFile.hdf from the File Select dialog brings up the File Contents pop-up shown in Figure 4.12.5-41.

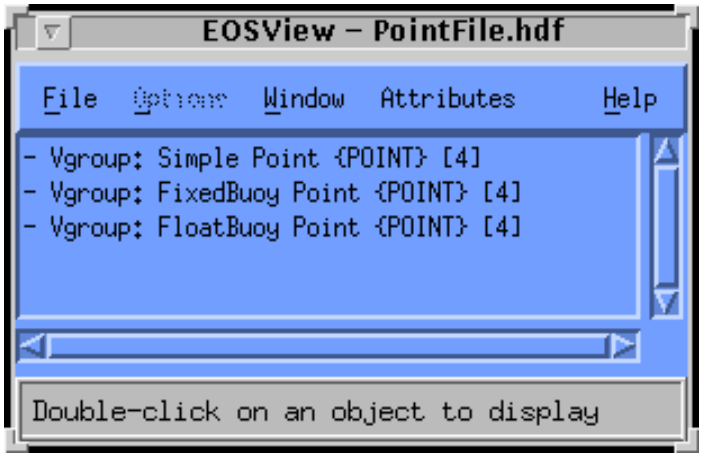

Figure 4.12.5-41. PointFile Contents Pop-up

Double-clicking on an item in the PointFile pop-up (in this example, the *Vgroup: FloatBuoy Point {POINT} [4]* object is selected) opens the Point Select Pop-up shown in Figure 4.12.5-42.

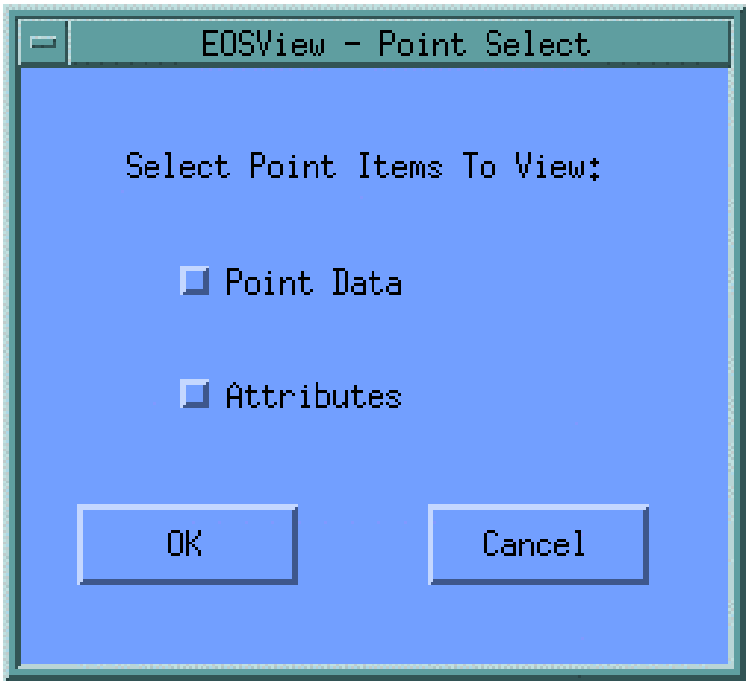

Figure 4.12.5-42. Point Select Pop-up

Either Point Data, Attributes or both options can be selected. Clicking on OK opens the corresponding windows for the options selected. Clicking on Cancel closes the Point Select Pop-up with no action being taken. Assuming both items have been selected, the windows as described below appear.

Point Data

To view the Point Data of the selected Point object, simply click on the Point Data checkbox in the EOSView - Point Select window and press the OK button. This causes the EOSView-Point Level Info pop-up to appear as shown in Figure 4.12.5-43.

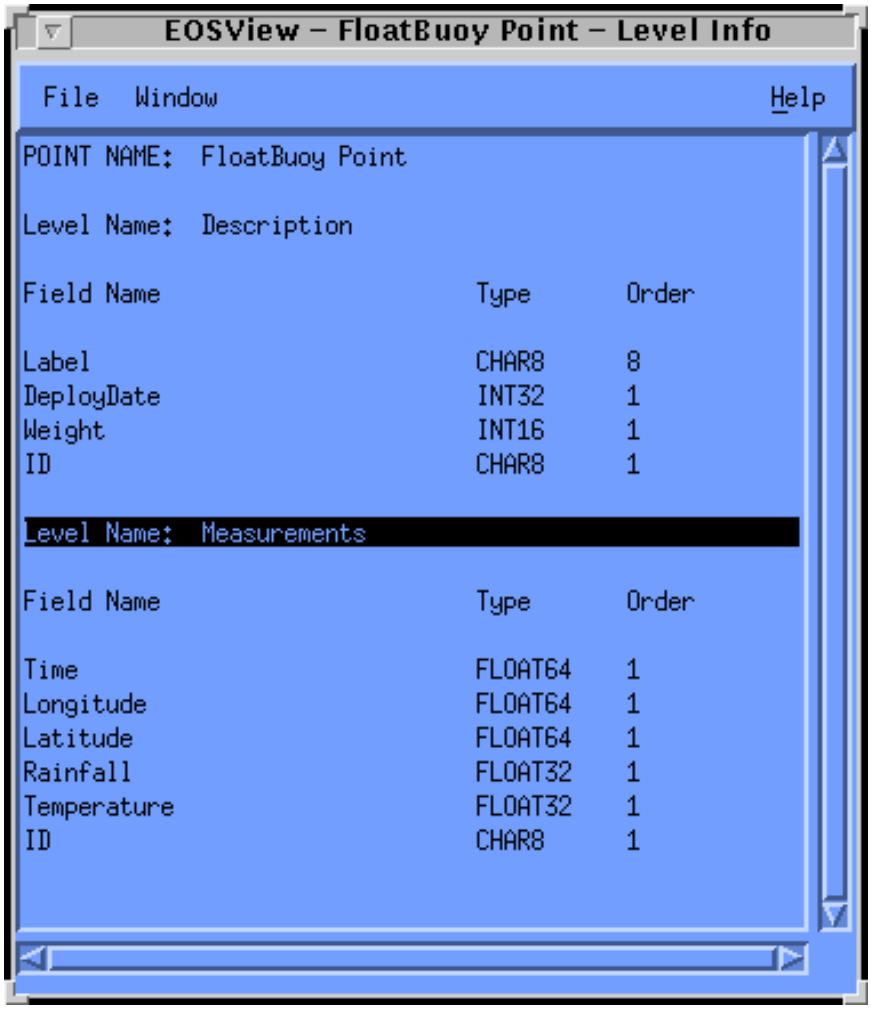

Figure 4.12.5-43. Level Info Pop-up

Double-clicking on any **Level Name** brings up the Vdata field select pop-up, shown in Figure 4.12.5-20. The operation of the Vdata field select pop-up is described in Section 4.12.5.2.14. See Section 4.12.5.2.26 for a description of saving the contents of the window to an ASCII file.

Selecting a field or multiple fields bring up the table window shown in Figure 4.12.5-44.

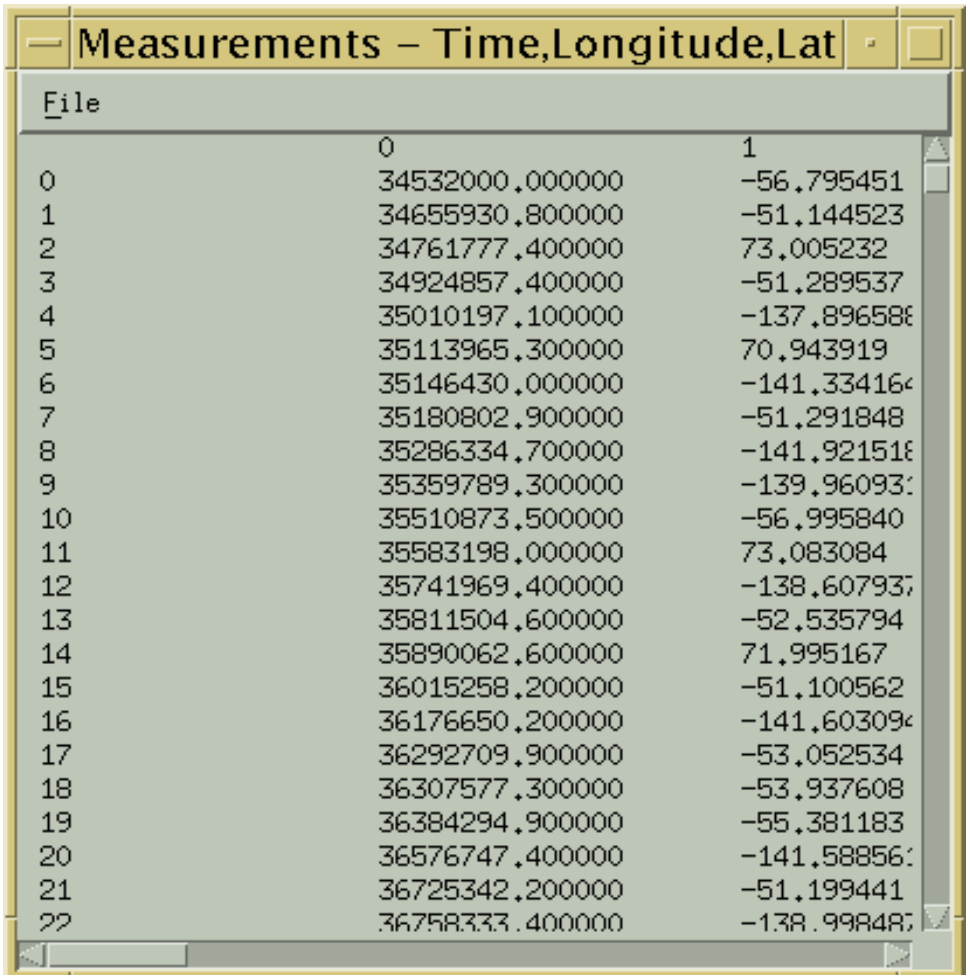

Figure 4.12.5-44. Vdata Table Pop-up

The data in this table can be saved by selecting Save from the File pulldown menu (see Section 4.12.5.2.14 for a sample of a Plot Window). The statistics of this table can be viewed by selecting Statistics from the File pulldown menu. To close this window select Close from the file pulldown menu.

Attributes

To view the attributes of the selected Point Select object, click on the Attributes checkbox in the EOSView - Point Select window and press the OK button. This window is similar to the Grid file attributes pop-up described in Section 4.12.5.2.17 "EOSView Grid Select GUI " (see Attributes).

4.12.5.2.18 Pulldown Menus

The File Contents Displays all have a common pulldown menu structure with the following options: **File, Options, Window, Attributes,** and **Help**. These are described in the following sections.

4.12.5.2.19 File Pulldown Menu

The **File** pulldown menu consists of the following options: File Info, Save, and Close. The Close pulldown menu closes the File Contents Display Pop-up and all windows derived from the window. The Save feature is described in Section 4.12.5.2.26 "Save Pulldown Menu." The File Info pulldown menu selection allows the operator to bring up information on the number of Raster Image groups, scientific data groups, palettes, Vgroups, LoneVdata, and annotations in the form of a File Information dialog as shown in Figure 4.12.5-45.

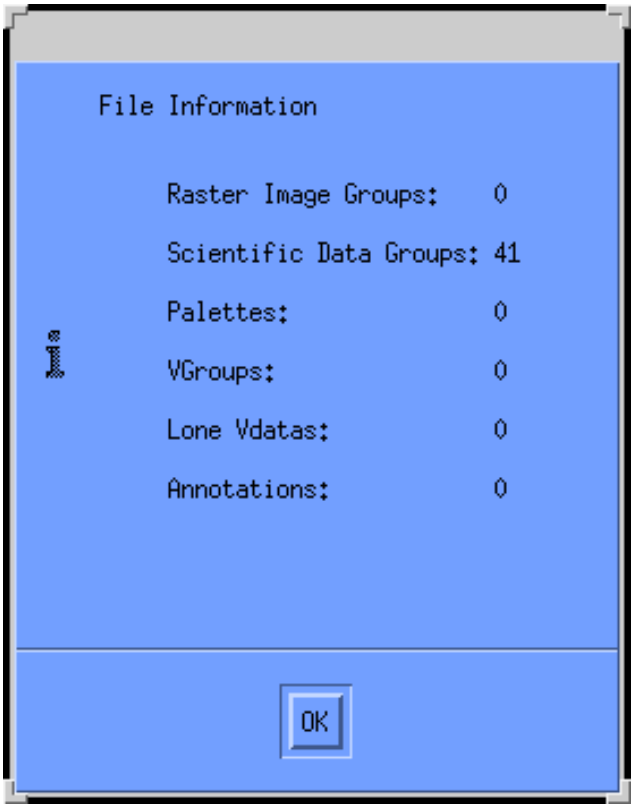

Figure 4.12.5-45. File Information Dialog

Clicking the **OK** button closes the File Information Dialog.

4.12.5.2.22 Options Pulldown Menu

The Options pulldown menu and its **Animate images** selection becomes sensitized when the selected file contains multiple Raster Image Groups. This causes all the images to be lined up and displayed in order in an EOSView - Animation Window. The Animation Window is depicted in Figure 4.12.5-46, with different frames of an actual animation shown (skull.hdf file).

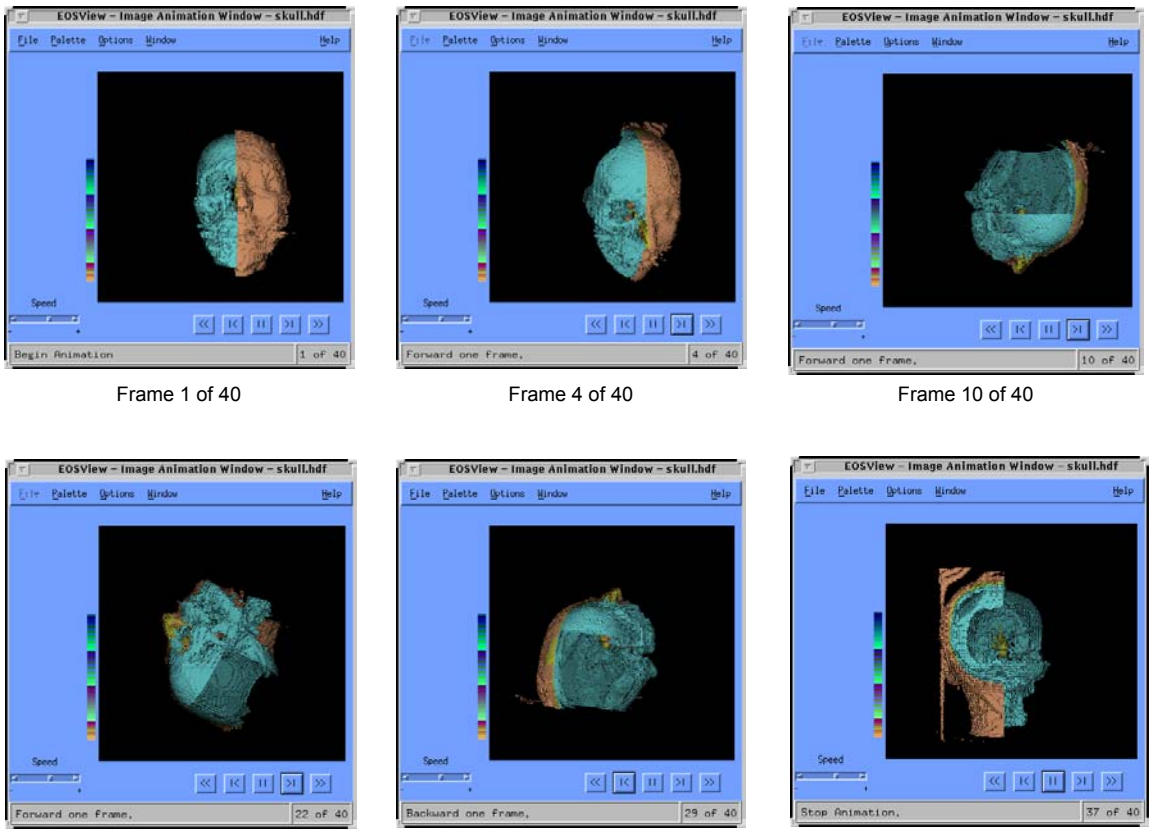

Figure 4.12.5-46. Animation Window Pop-up

The Animation Window has the following features:

- **Closing Animation Window** – The Close option on the menu bar of the animation window causes the animation window to close
- **Palette** – see Section 4.12.5.2.10 for a description of the Image Display palette
- **Modes** -- There are three modes of animation. These modes can be selected by selecting the Options - Modes options of the animation window menu bar
  - The first option "Stop at end" displays the images until the last image or first image is displayed. This is based upon what direction was selected for animation
  - The second option "Continuous run" causes the animation to go into an endless loop in the direction selected until the stop button is pressed
  - The third option "Bounce" causes the animation to run back and forth in forward and reverse order until the stop button is pressed

- **Speed Control** -- The speed control slider adjusts the speed of the animation to the desired speed. Moving the slider in the "+" direction increases the animation speed while moving the slider in the "-" direction causes the animation to decrease in speed
- **Window** – see Section 4.12.5.2.23 “Window Pulldown Menu”
- **Help** – see Section 4.12.5.2.25 “Help Pulldown Menu”
- **Start/Stop Buttons** -- There are five buttons centered underneath the animation image. The five buttons are labeled "<<" "|<" "||" ">|" and ">>". These buttons are known as the Start/Stop Buttons
  - The button labeled "<<" causes the animation to begin in reverse direction
  - The button labeled "|<" causes the animation image to decrease by one frame
  - The button labeled "||" is the Stop button and causes the animation to stop
  - The button labeled ">|" causes the animation image to increase by one frame
  - The button labeled ">>" causes the animation to begin in forward direction

  The mode of operation of these buttons is controlled by selecting the Modes option on the menu bar.

4.12.5.2.23 Window Pulldown Menu

The Window pulldown menu lists all windows which are currently open. Any window selected from this list is shuffled to the top. Figure 4.12.5-47 shows the Window pulldown menu provided when the EOSView Main Window, orbital.hdf, rainbow.hdf and skull.hdf files are open.

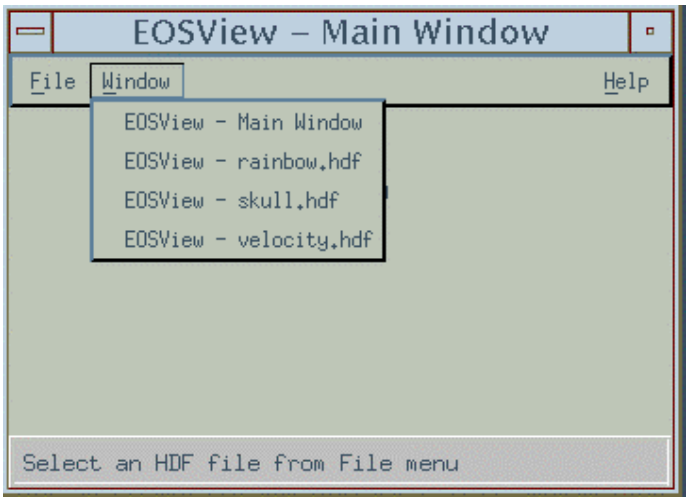

Figure 4.12.5-47. EOSView Main Screen Showing Window Pulldown Menu

The Window pulldown menu provides the same function on all other screens on which it appears.

4.12.5.2.24 Attributes Pulldown Menu

The Attributes option contains one pull-down menu item "Global…." which brings up a text file window (shown in Figure 4.12.5-48) with a list of attributes (e.g., parameters, values, version numbers) for the entire file or brings up a dialog, which states there are no attributes available.

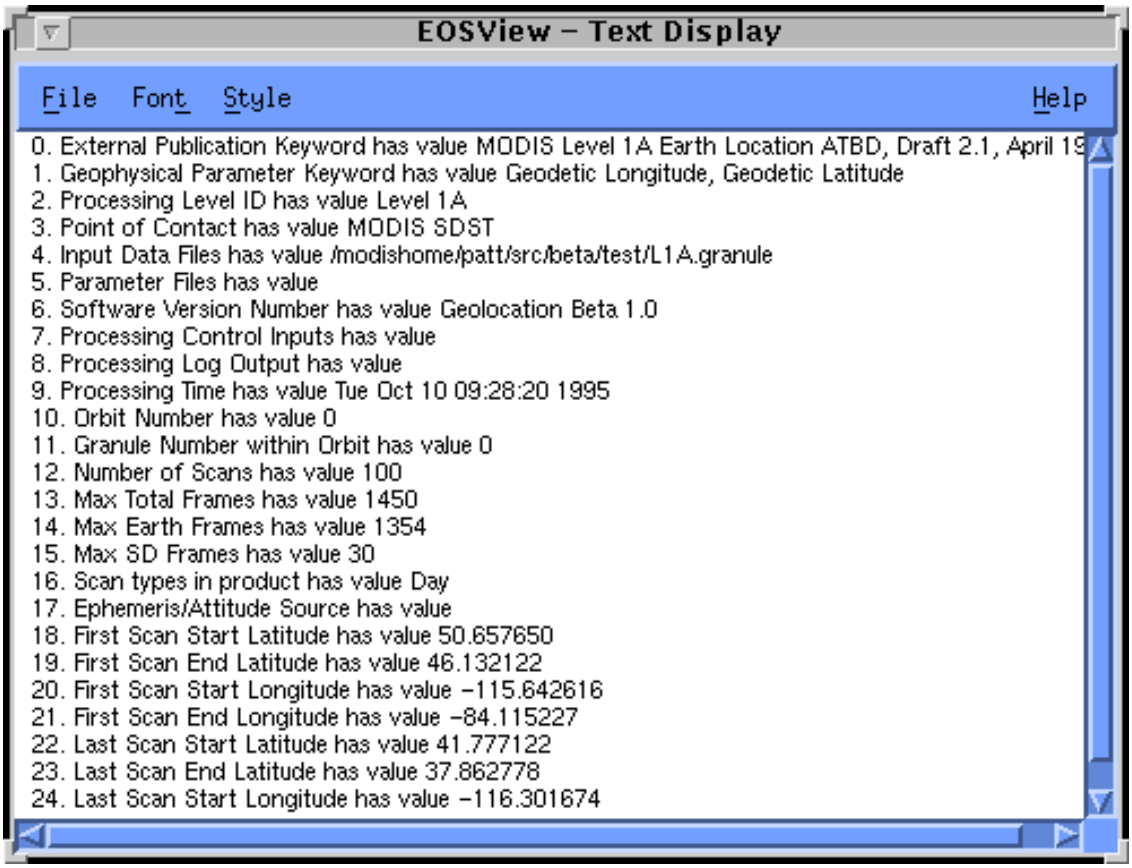

Figure 4.12.5-48. Text Display Pop-up

From the text window, the operator can do the following using the pull-down menus:

- **File** – exit the window
- **Font** – select from a list of fonts (e.g., courier, Helvetica). A box showing what the text looks like based on the selection is provided
- **Style** – select from a list of styles (e.g., normal, bold, italic) and point sizes (e.g., 8 pt, 10 pt.)
- **Help** – see Section 4.12.5.2.25 "Help Pulldown Menu"

4.12.5.2.25 Help Pulldown Menu

The Help option contains a pulldown menu with the following selections: help on context, on help, on window, keys, contents, index and version.

Help On Context – turns the mouse pointer into a "**?**" symbol, which can be clicked on an area of interest, bringing up help text for that item.

Help On Help – tells the operator how to use the EOSView on-line help feature (see Figure 4.12.5-49) to help understand how to navigate through the Help system using the on-line hypertext system.

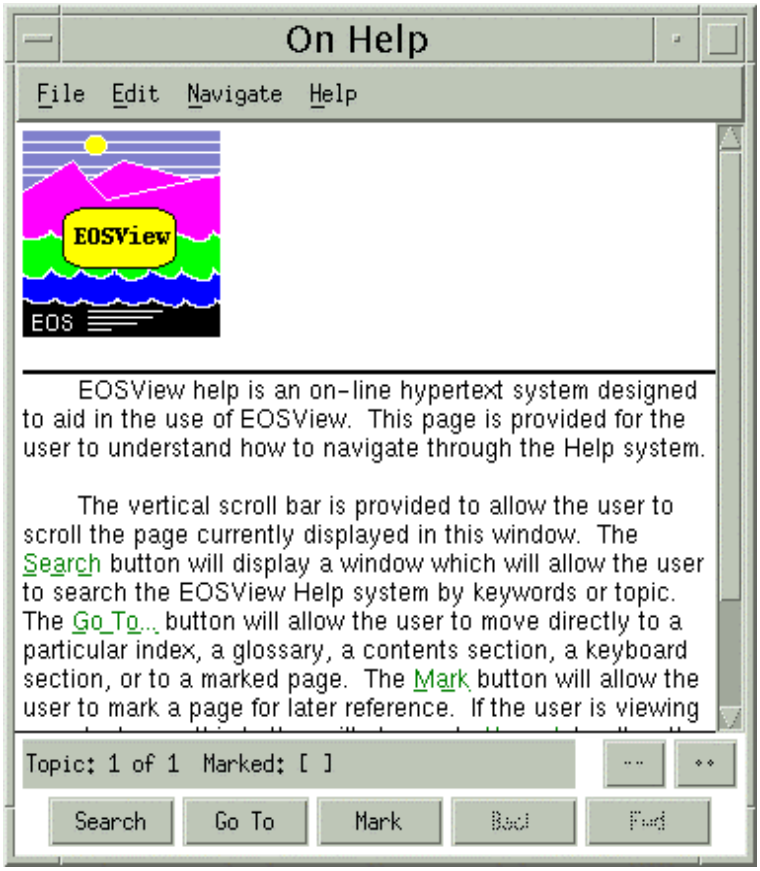

Figure 4.12.5-49. EOSView On Help Pop-up

- **File** – allows the operator to exit the On Help window. Print and Print Setup are not available
- **Edit** – allows the operator to Copy, Copy Part of a Topic, or Copy as Wrapped
- **Navigate** – allows the operator to search for a topic, go to a specified topic, bookmark items of interest, go forward and back to a topic (these items are available in the form of pushbuttons at the bottom of the screen), and view a previous or next topic
- **Help** – provides help on how to use help and "about help" (not functional)

The On Help window provides the following pushbuttons:

- The **Search** button provides a way to search the EOSView Help system in one of two ways. The operator can select to search by Topic in which case a list of topics are displayed for the operator to choose from or the operator can select search by Keyword in which case the operator is presented with a list of keywords from which to choose
- The **Go To** button allows the operator to move to one of five topics:
  1. Index - the help described in the Help - Index selection from the menu bar.
  2. Glossary - a defined glossary of selectable terms common to EOSView.
  3. the help described in the Help - Contents selection from the menu bar.
  4. the help described in the Help - On Keys selection from the menu bar.
  5. any marked page (see below).
- The **Mark** button allows the operator to mark a page. Once the page is marked the page appears in a list box in the "Topic Go to Dialog" box. The marked page can then be selected and immediately recalled. The "Mark" button appears as "Unmark" when viewing a marked page
- The **Unmark** button allows the operator to unmark a marked page. If the operator is currently viewing a marked page an "X" appears in the check box labeled "Marked:." Pressing the "Unmark" button causes the "X" to disappear and the page does not appear in the list box of the "Topic Goto Dialog"
- The **Back** button returns the operator to the previously viewed page. The operator should think of the help system as a book. The back button only appears sensitized if the previously viewed page would be logically backward from the point of current view
- The **Forward** button moves the operator to the last forward page viewed. The operator should think of the help system as a book. The forward button only appears sensitized if the previously viewed page would have a page number greater than the page being currently viewed

Help On Window

The Help On Window is the same as the Help On Index Window shown below.

Help On Keys

When Help On Keys is selected from the Help pulldown menu, the following message appears in a Keys Window: “EOSView uses no special keys to traverse through the program. To navigate through EOSView simply use the mouse and click on the options desired.”

Help On Contents

The Help On Contents window tells the operator the EOSView is a tool written to assist operators view the contents of HDF files and it is capable of displaying the contents of files containing HDF-EOS data. More help can be obtained by selecting the topic desired (see Figure 4.12.5-50).

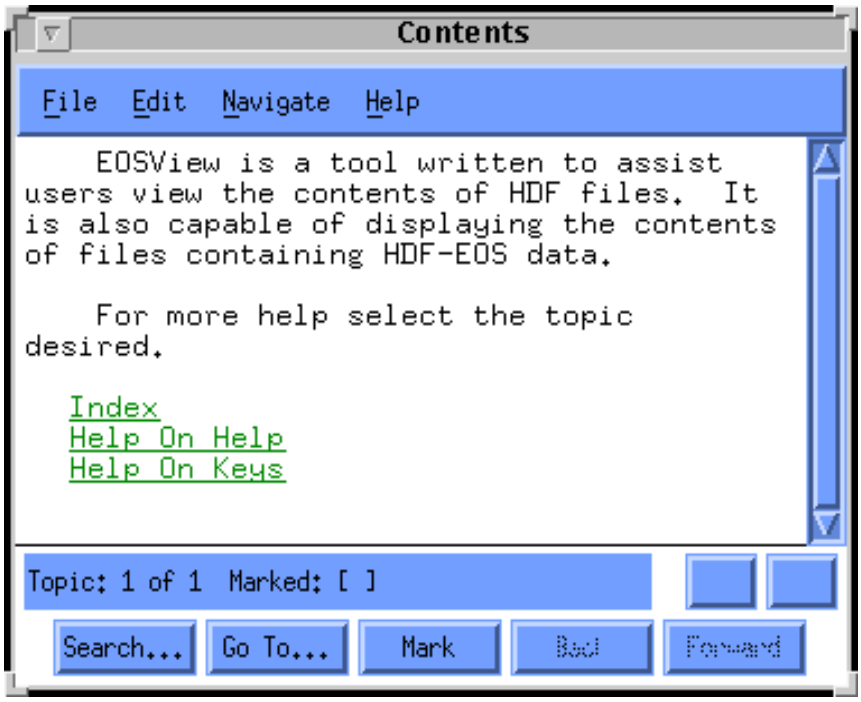

Figure 4.12.5-50. Help On Contents Pop-up

Help On Index

Selecting Help On Index brings up the Index window shown in Figure 4.12.5-51. This pop-up presents a list of each EOSView window and a list of hypertext help items.

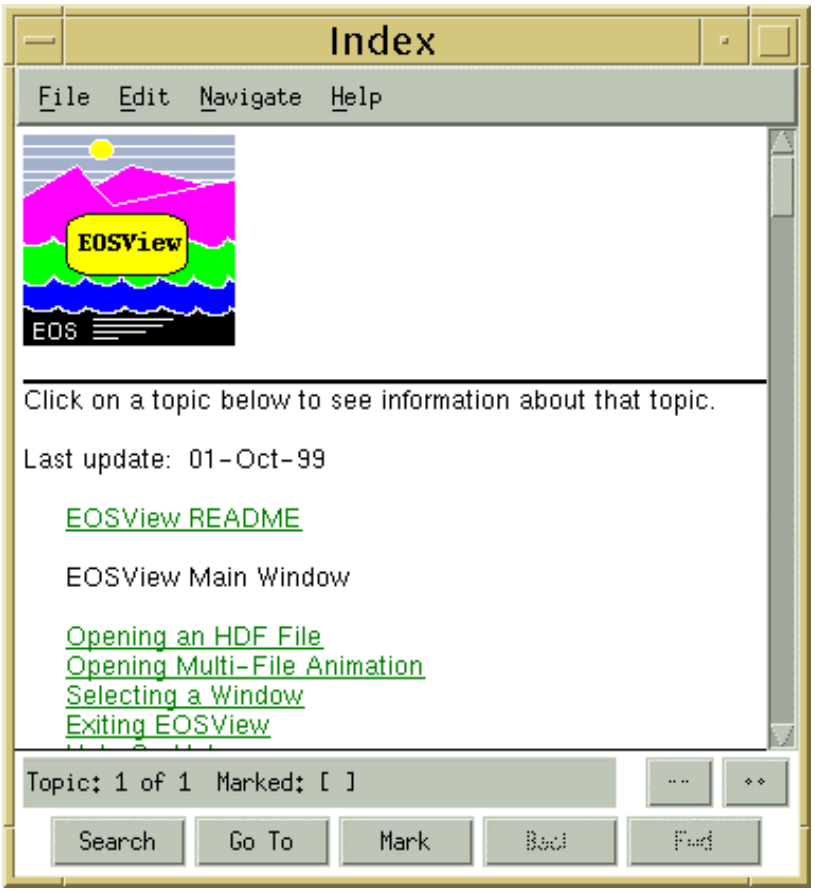

Figure 4.12.5-51. Help On Index Pop-up

Help On Version

Selecting Help On Version from the Help pulldown menu brings up the dialog shown in Figure 4.12.5-52.

Figure 4.12.5-52. Help On Version Dialog

Clicking on the Help button takes the operator to the Help on Contents screen (Figure 4.12.5-49). Click on Cancel to close the dialog.

4.12.5.2.26 Save Pulldown Menu

The Save option allows the user to save the contents listed in the window to an ASCII file. Selecting the Save option displays the File Save Dialog (Figure 4.12.5-12). Upon entering a unique file name, the contents of the window is saved to an ASCII file exactly as they are listed in the window. This Save option is different from the EOSView table save option (described in Section 4.12.5.2.8); there is no option to save in binary format. This option exists in EOSView windows which incorporates a scrollable text list as the main window function.

4.12.5.3 Required Operating Environment

EOSView was built and tested in a multi-platform environment. The list of approved platforms, which includes information about operating system is given in Table 4.12.5-9. The platforms should run Motif 1.2 window manager.

Table 4.12.5-9. Operating Systems

Platform	OS	Version
Sun Sparc	Solaris	8
SGI	IRIX	6.5 or higher
DEC Alpha	OSF1	4.0
IBM	AIX	4.2

Table 4.12.5-10 lists the environment variables for EOSView. These variables are optional.

Table 4.12.5-10. Environment Variables Used by EOSView

Environment Variable	Description or Valid Ranges
UIDPATH	Location of the eosview.uid file containing a description of GUI objects.
EOSVIEWHELPDIR	Location of eosview.csc (hypertext on-line help file) and eosview.dat file (idl commands).
ECS_HOME	Directory for File Selection dialog to begin.

The following attributes can be modified through the standard .Xdefaults file:

- focus policy (mouse pointer)
- icon geometry (size and location)
- fonts
- colors

4.12.5.3.1 Interfaces and Data Types

EOSView exchanges data of various types through internal interfaces within ECS:

- IDL for graphics
- XVT for GUI builder
- links with the HDF compile time library

4.12.5.4 Databases

None.

4.12.5.5 Special Constraints

EOSView reads only HDF and HDF-EOS formatted files.

4.12.5.6 Outputs

Outputs from EOSView include HDF file screen images and data displays.

4.12.5.7 Event and Error Messages

See Appendix A.

4.12.5.8 Reports

None.

4.12.6 ASTER On-demand Product Request Form (ODFRM)

ODFRM is a World Wide Web (WWW) based form that allows users to enter and submit ASTER on-demand processing orders. Users can perform the functions listed in Table 4.12.6-1 with the ODFRM.

Table 4.12.6-1. Common ECS Operator Functions Performed with ODFRM

Operating Function	Command/Script or GUI	Description	When and Why to Use
Login	ODFRM start page	User selects this to login to the ODFRM.	To order L1B (non-standard from GDS), the user needs to be an authorized ECS user.
On-demand Product Request	ASTER Product Requests	User selects one of the Radio buttons and clicks on Continue.	User can order the listed products by selecting the product and pressing continue button.

4.12.6.1 Quick Start Using ODFRM

The ODFRM tool is a web-based GUI which ECS users can access using Netscape or the Internet Explorer browser.

4.12.6.1.1 Accessing ODFRM

To view the ODFRM web page, first bring up the browser. Next, enter the URL of the ODFRM web page at the desired DAAC site. It is of the form:

http://<DAAC>0ins02u.ecs.nasa.gov:1000<mode>/ where:

<DAAC> is the DAAC site code where:
- **e** is for EDC
- **g** is for GSFC
- **l** is for LARC
- **n** is for NSIDC
- (Note, **t1ins01u.ecs.nasa.gov:1000<mode>** is for the ECS Verification and Test Facility (VATC))

<mode> is the ECS mode where:
- **0** = OPS
- **1** = TS1
- **2** = TS2

4.12.6.2 ODFRM Home Page

Figure 4.12.6-1 shows the ODFRM home page.

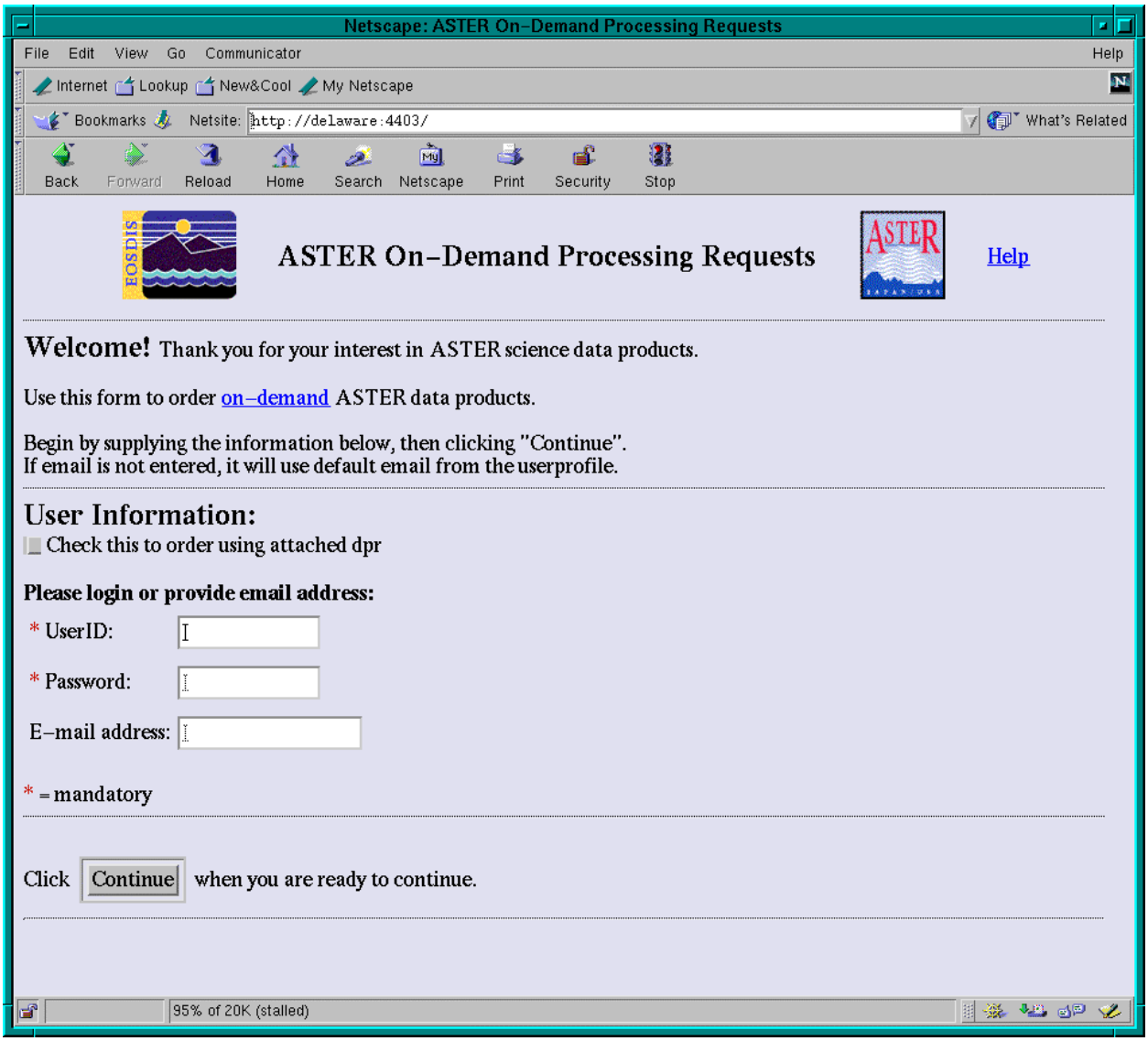

Figure 4.12.6-1. ODFRM Home Page

To order any ASTER on-demand products, one needs to be an ECS user. In the home page, enter your **UserId** and **Password.** The **E-mail address** field is an optional field entered only to override the standard email address, which ODFRM finds in a registered user's profile. If the request is to be sent using the Java DAR Tool (JDT), then the **Check this to order using attached DPR** button should be pressed. On finally pressing the **Continue** button, ODFRM brings up the page in Figure 4.12.6-2 for standard requests or Figure 4.12.6-3 for requests having an attached DPR.

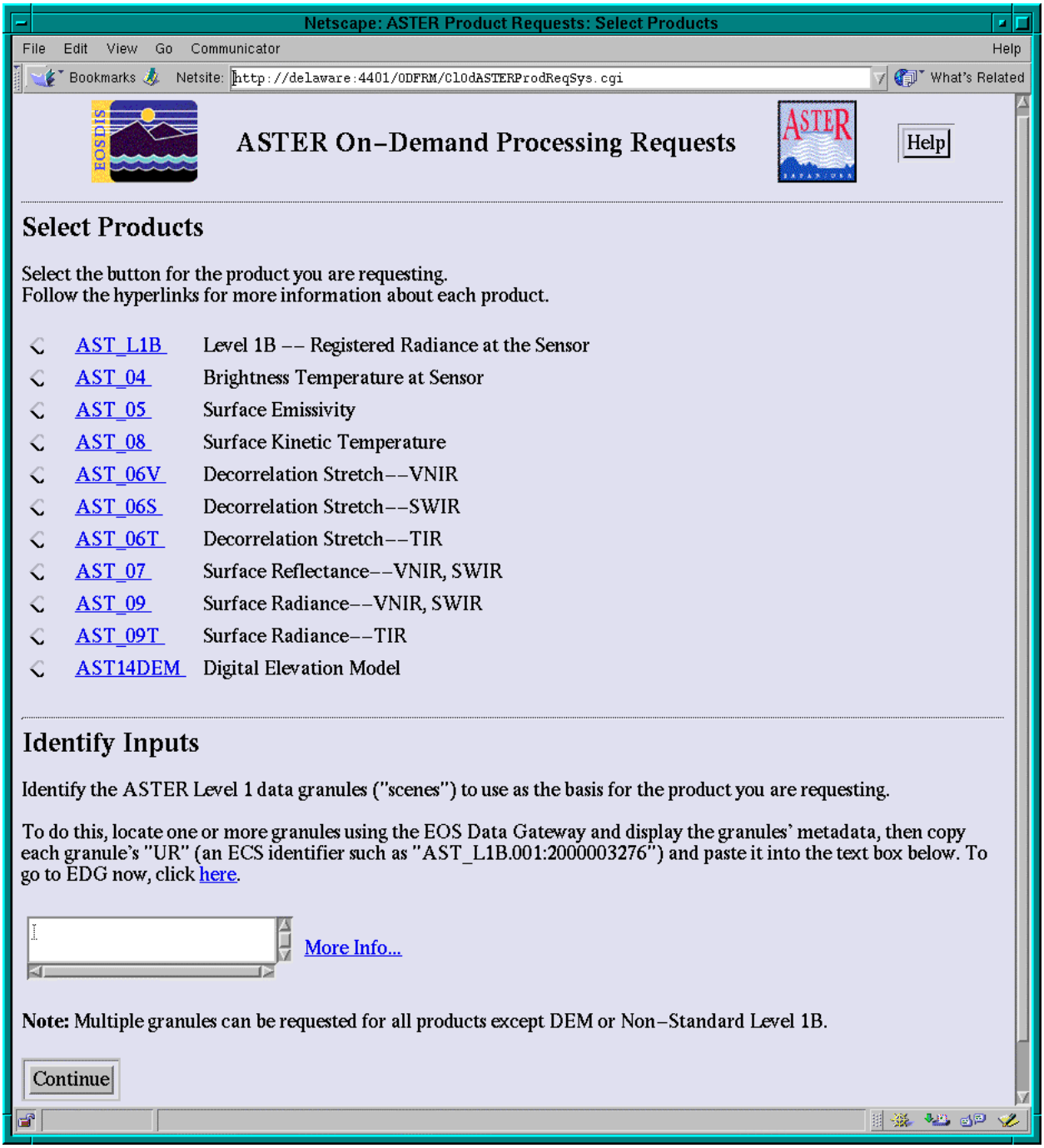

Figure 4.12.6-2. ASTER Product Request Selection Page

From the ASTER Product Request screen, the user can select and submit an order for products. Alternatively, by clicking on the hyperlinks, more information about the product can be

obtained. The user has to supply AST_L1A or AST_L1B granules to order the Aster on-demand product.

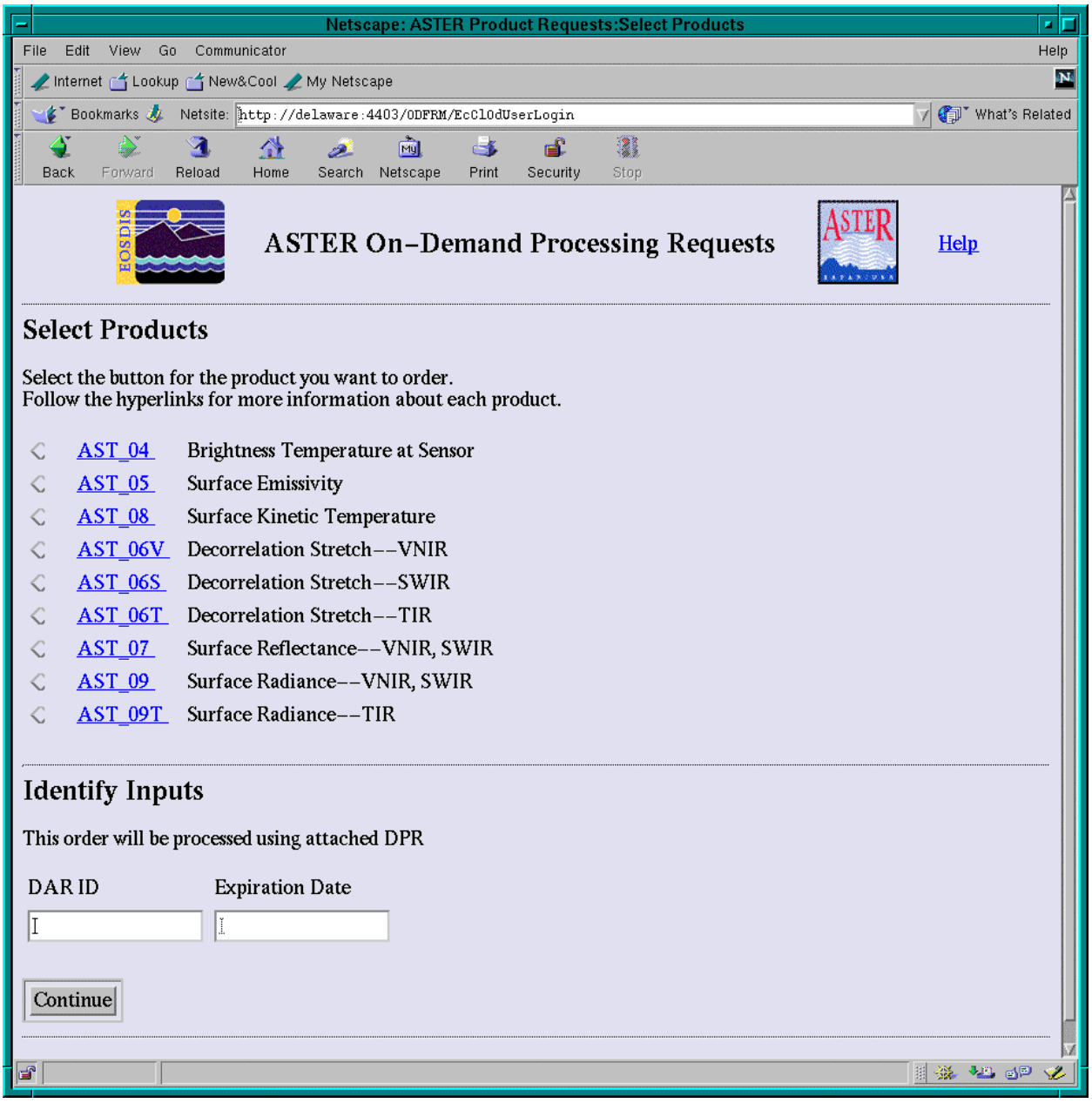

Figure 4.12.6-3. ASTER Product Request Selection Page Using Attached DPR

For product requests with an attached DPR, the user selects the product from the list in Figure 4.12.6.3, supplies the **DAR ID** and the **Expiration Date** then hits the **Continue** button.

4.12.6.2.1 AST_L1B (non-standard)

To order AST_L1B (non-standard from GDS), visible on the Product Requests Selection page only to users with the correct privilege level, select the **AST_L1B** radio button and click on **Continue**. This brings up Figure 4.12.6-4 showing the AST_L1B Product Request Page. Select the parameters and click on the **Continue** button to order the AST_L1B product. It takes you to the Product Request Confirmation page.

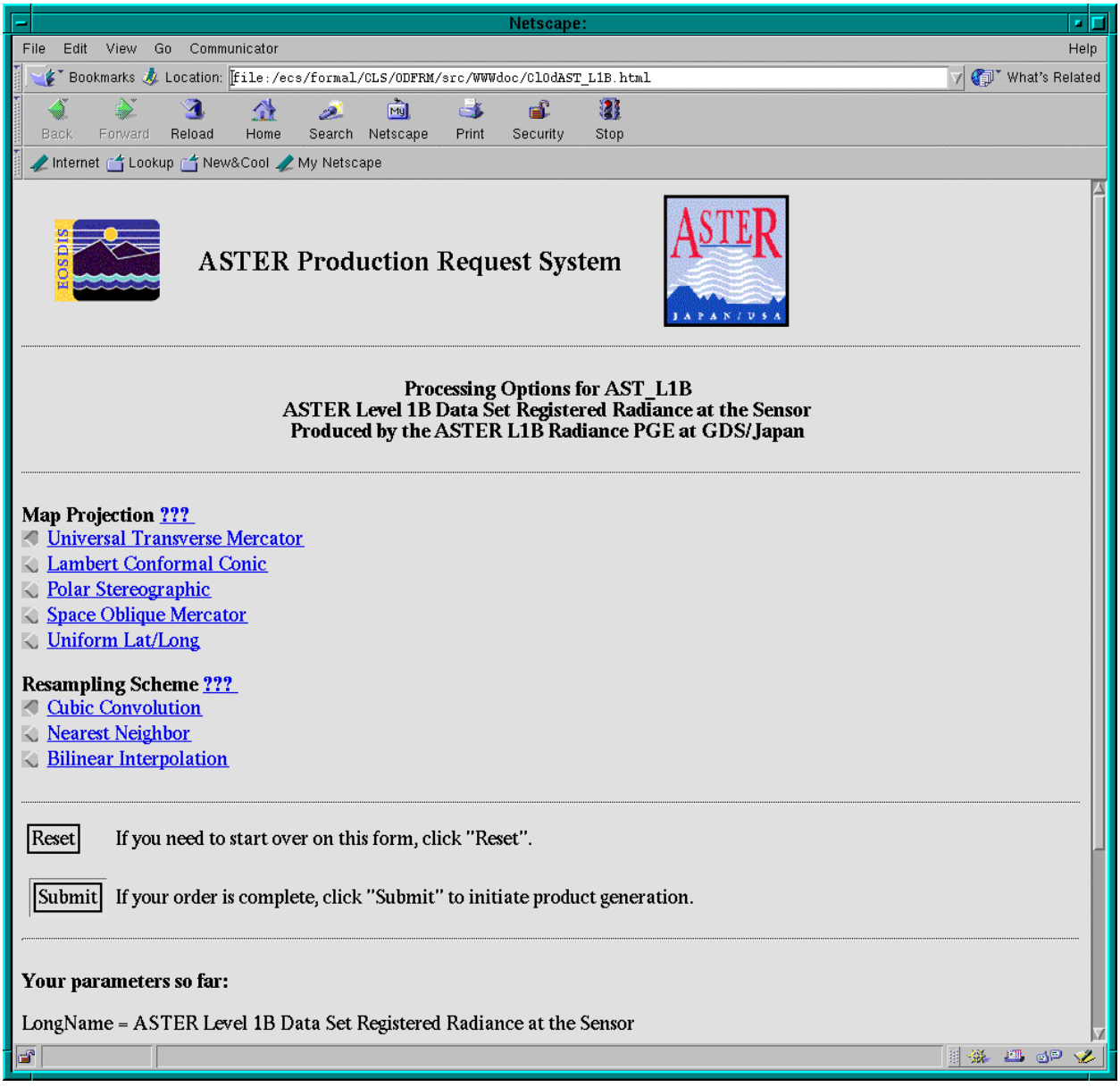

Figure 4.12.6-4. AST_L1B (non-standard) Product Request Page

4.12.6.2.4 AST_04

To order the AST_04 (ASTER Level 2 Brightness Temperature at the Sensor product), press the **AST_04** radio button on the Product Request page and then the **Continue** button. This takes you to the Media and Shipping Information page.

4.12.6.2.3 AST_05

To order the AST_05 (ASTER Level 2 Emissivity product), select the **AST_05** radio button on the Product Request Selection page and click **Continue**. This brings up Figure 4.12.6-5 showing the AST_05 Product Request Page. Click on the **Continue** button to order the AST_05 product. This takes you to the Media and Shipping Information page.

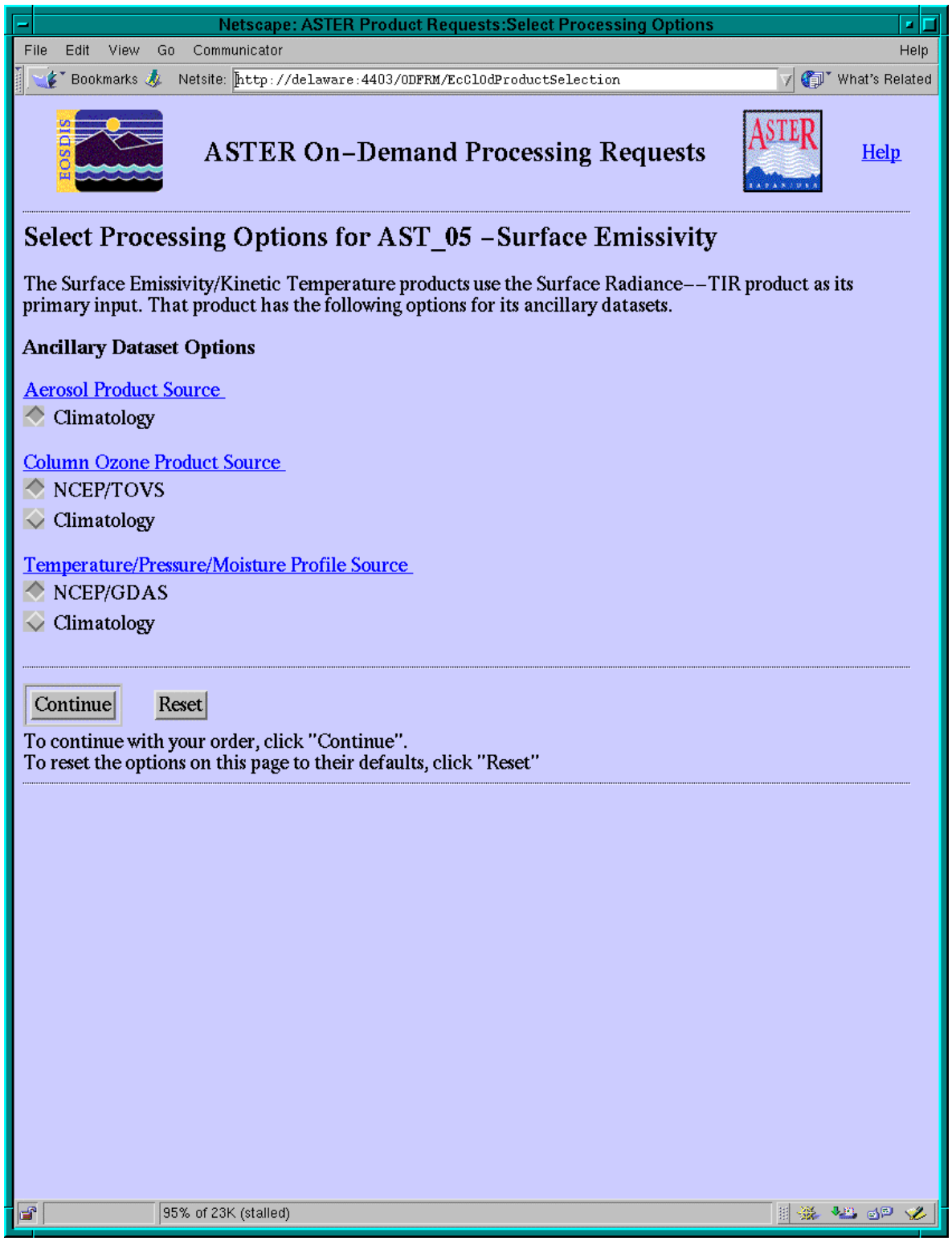

Figure 4.12.6-5. AST_05 Product Request Page

4.12.6.2.4 AST_08

To order the AST_08 (ASTER Level 2 Surface Temperature product), select the **AST_08** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-6 showing the AST_08 Product Request Page. Click on the **Continue** button to order the AST_08 product. This takes you to the Media and Shipping Information page.

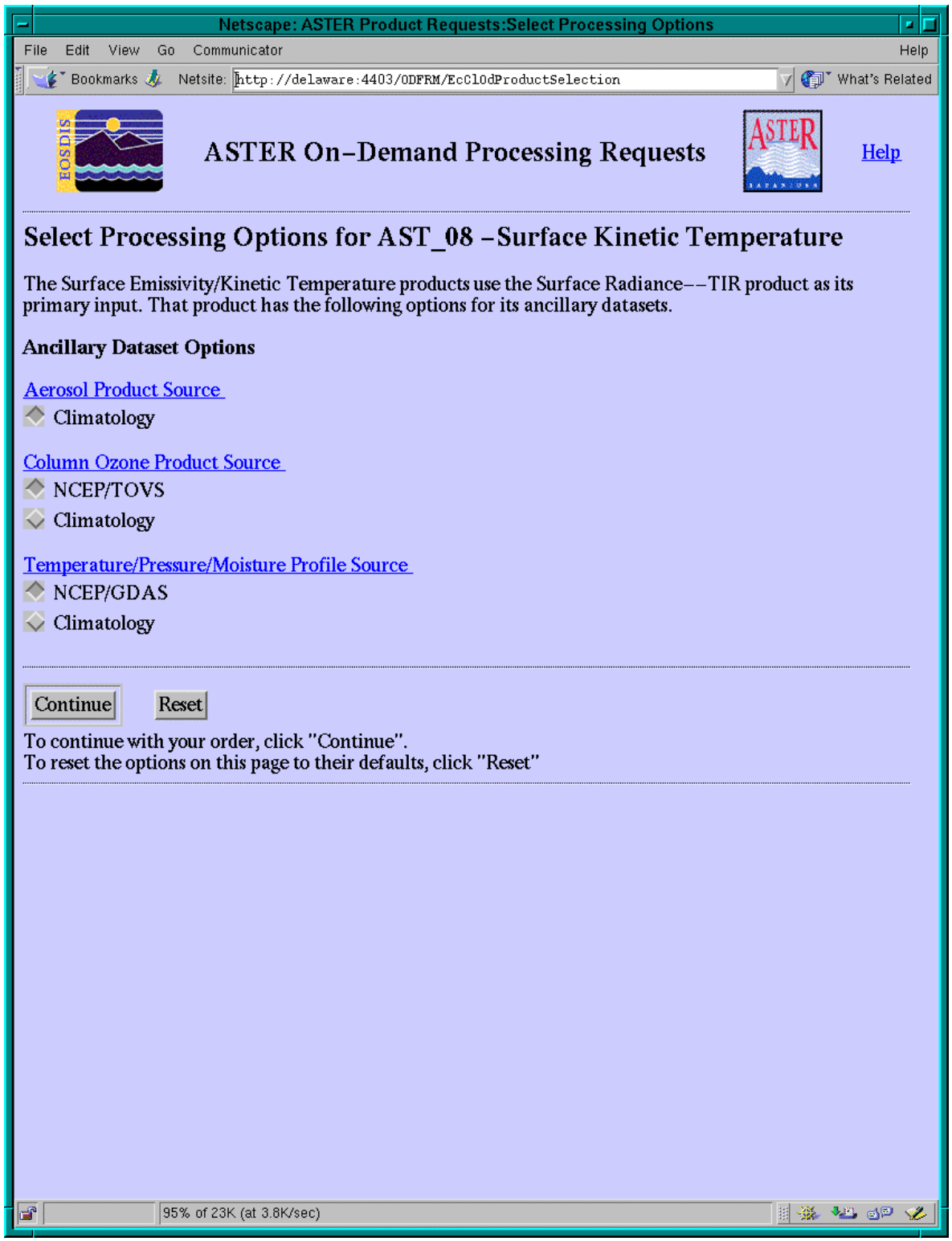

Figure 4.12.6-6. AST_08 Product Request Page

4.12.6.2.5 AST_06V

To order the AST_06V (ASTER Level 2 Decorrelation Stretch (VNIR) product), select the **AST_06V** radio button on the Product Request Selection page and then click on **Continue**. This brings up Figure 4.12.6-7 showing the AST_06V Product Request Page. Fill in all the parameters and click on the **Continue** button to order the AST_06V product. This takes you to the Media and Shipping Information page.

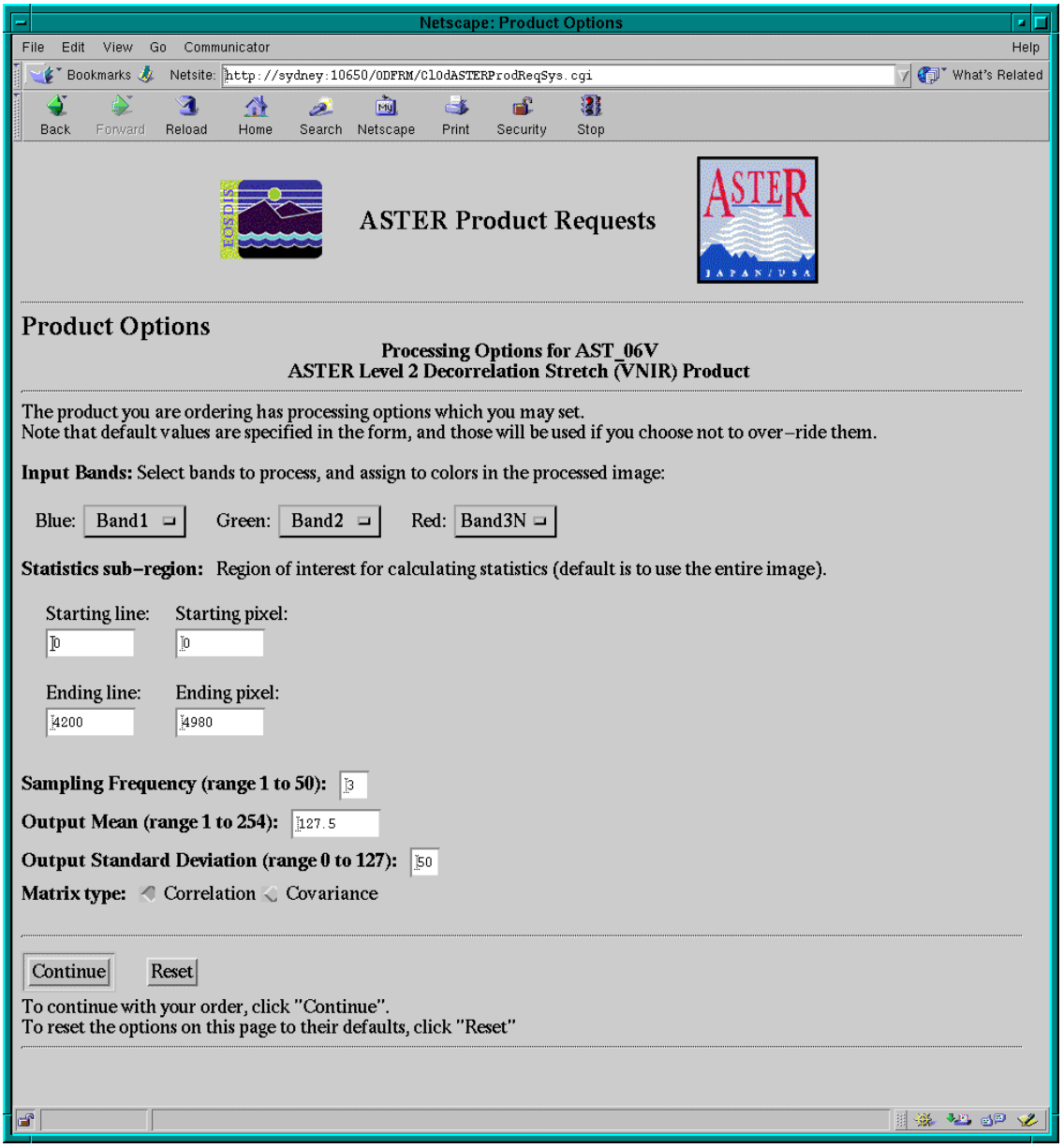

Figure 4.12.6-7. AST_06V Product Request Page

4.12.6.2.6 AST_06S

To order the AST_06S (ASTER Level 2 Decorrelation Stretch (SWIR) product), select the **AST_06S** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-8 showing the AST_06S Product Request Page. Fill in all the parameters and click on the **Continue** button to order the AST_06S product. This takes you to the Media and Shipping Information page.

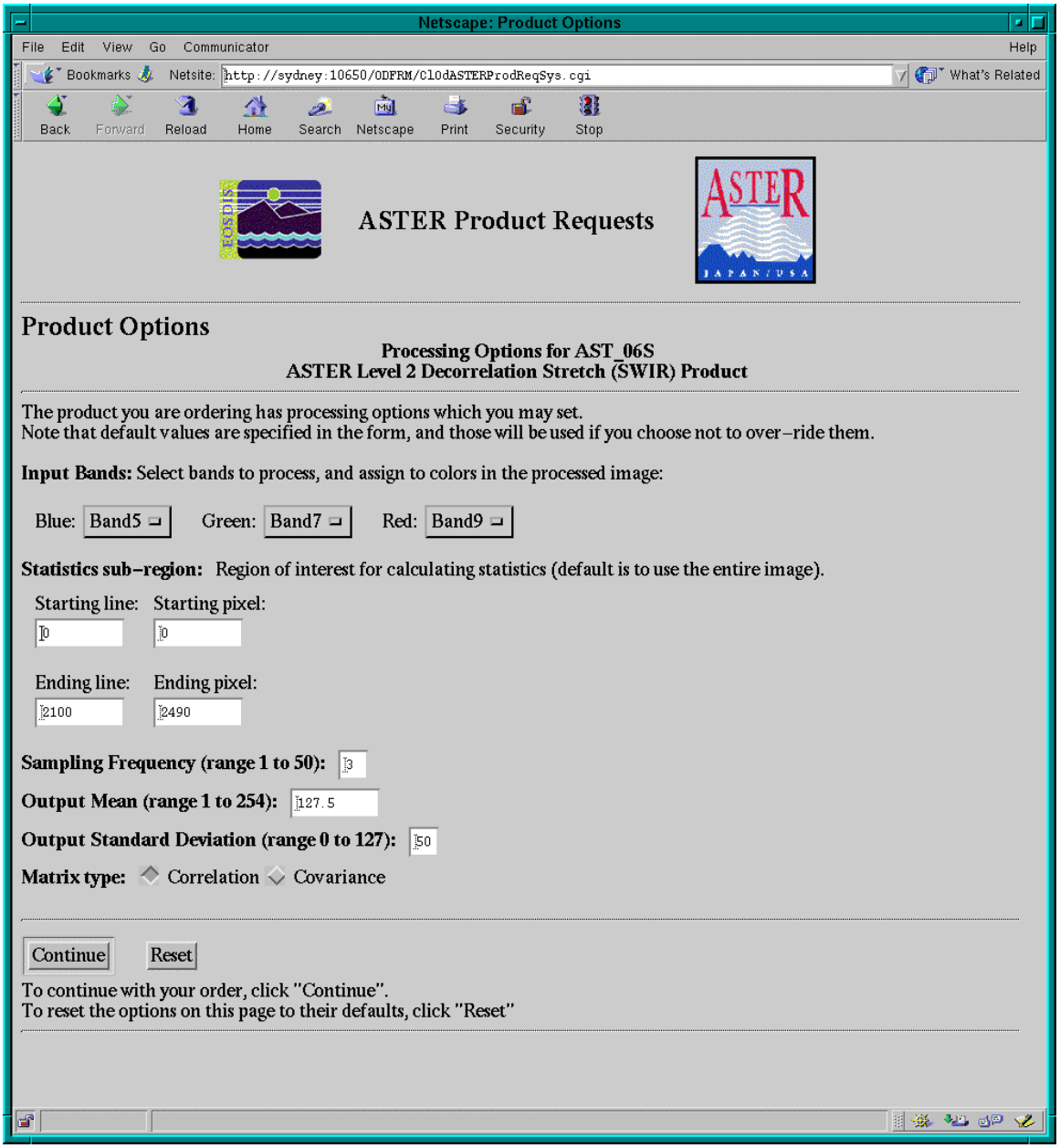

Figure 4.12.6-8. AST_06S Product Request Page

4.12.6.2.7 AST_06T

To order the AST_06T (ASTER Level 2 Decorrelation Stretch (TIR) product), select the **AST_06T** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-9 showing the AST_06T Product Request Page. Fill in all the parameters and click on the **Continue** button to order the AST_06T product. This takes you to the Media and Shipping Information page.

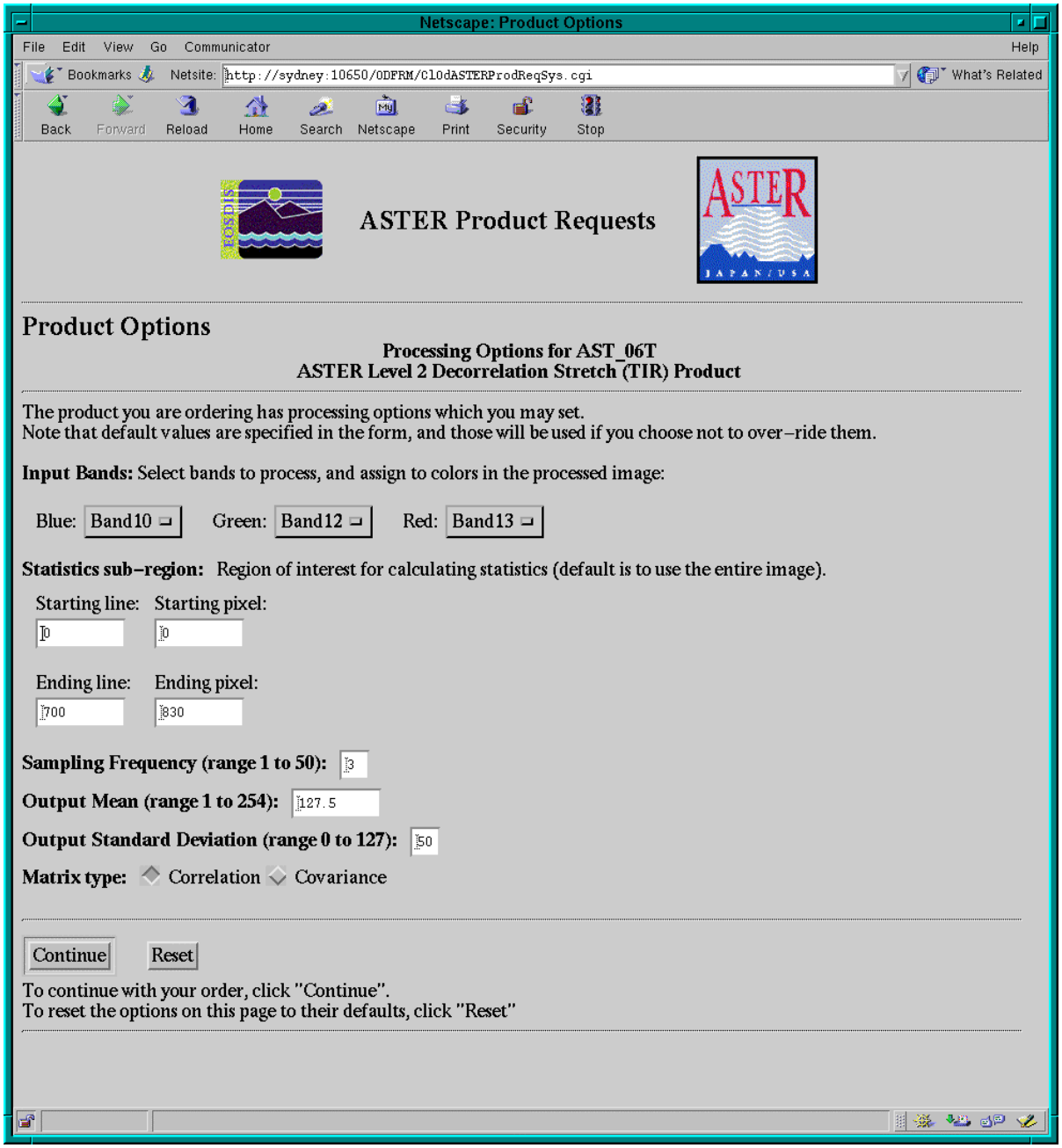

Figure 4.12.6-9. AST_06T Product Request Page

4.12.6.2.8 AST_07

To order the AST_07 (ASTER Level 2 Surface Reflectance (VNIR, SWIR) product), select the **AST_06T** radio button on the Product Request Selection page and then click on **Continue**. This brings up Figure 4.12.6-10 showing the AST_07 Product Request Page. Select the parameters and click on the **Continue** button to order the AST_07 Product. This takes you to the Media and Shipping Information page.

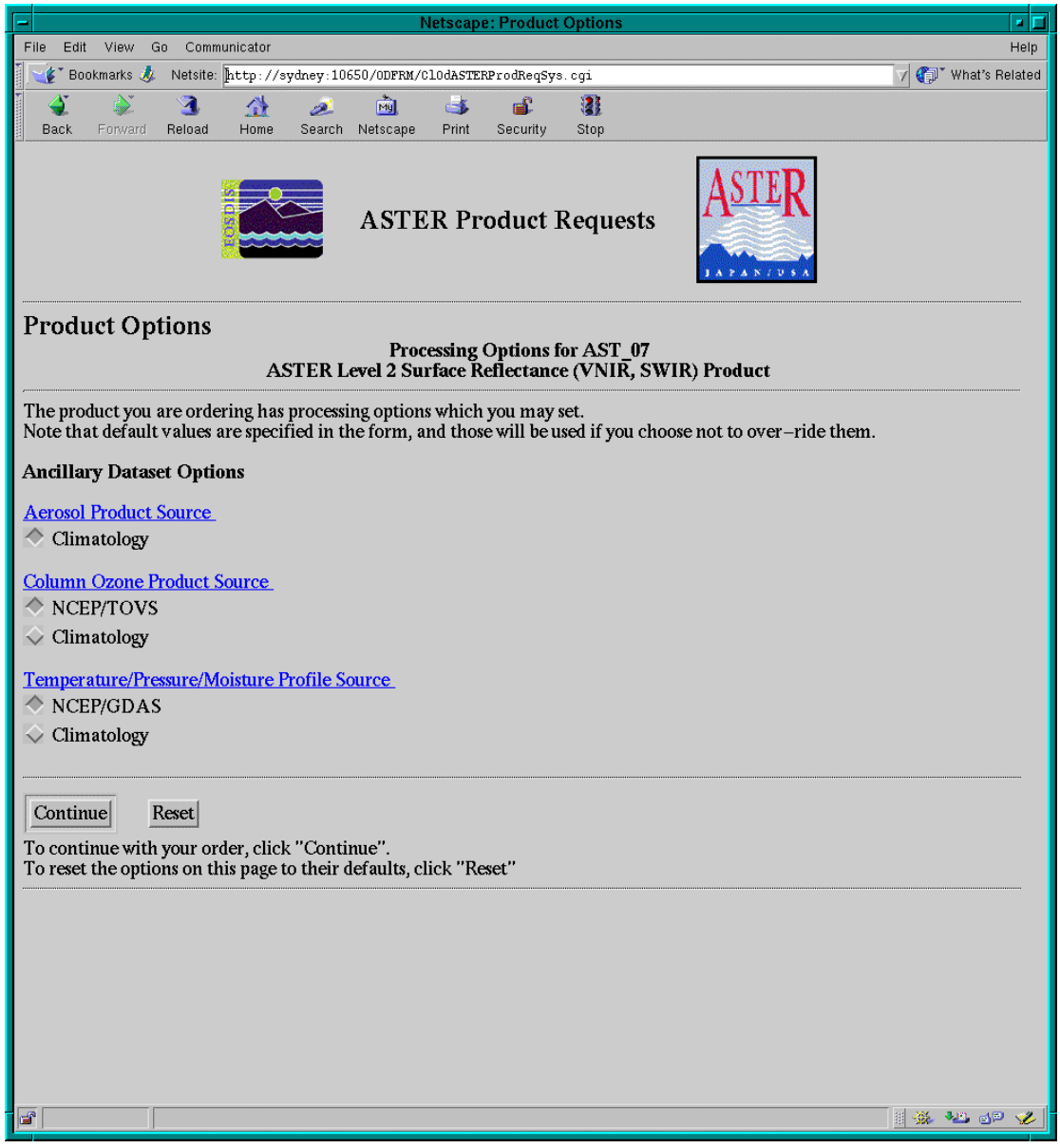

Figure 4.12.6-10. AST_07 Product Request Page

4.12.6.2.9 AST_09

To order the AST_09 (ASTER Level 2 Surface Radiance (VNIR, SWIR) product), select the **AST_06T** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-11 showing the AST_09 Product Request Page. Select the parameters and click on the Continue button to order the AST_09 product. This takes you to the Media and Shipping Information page.

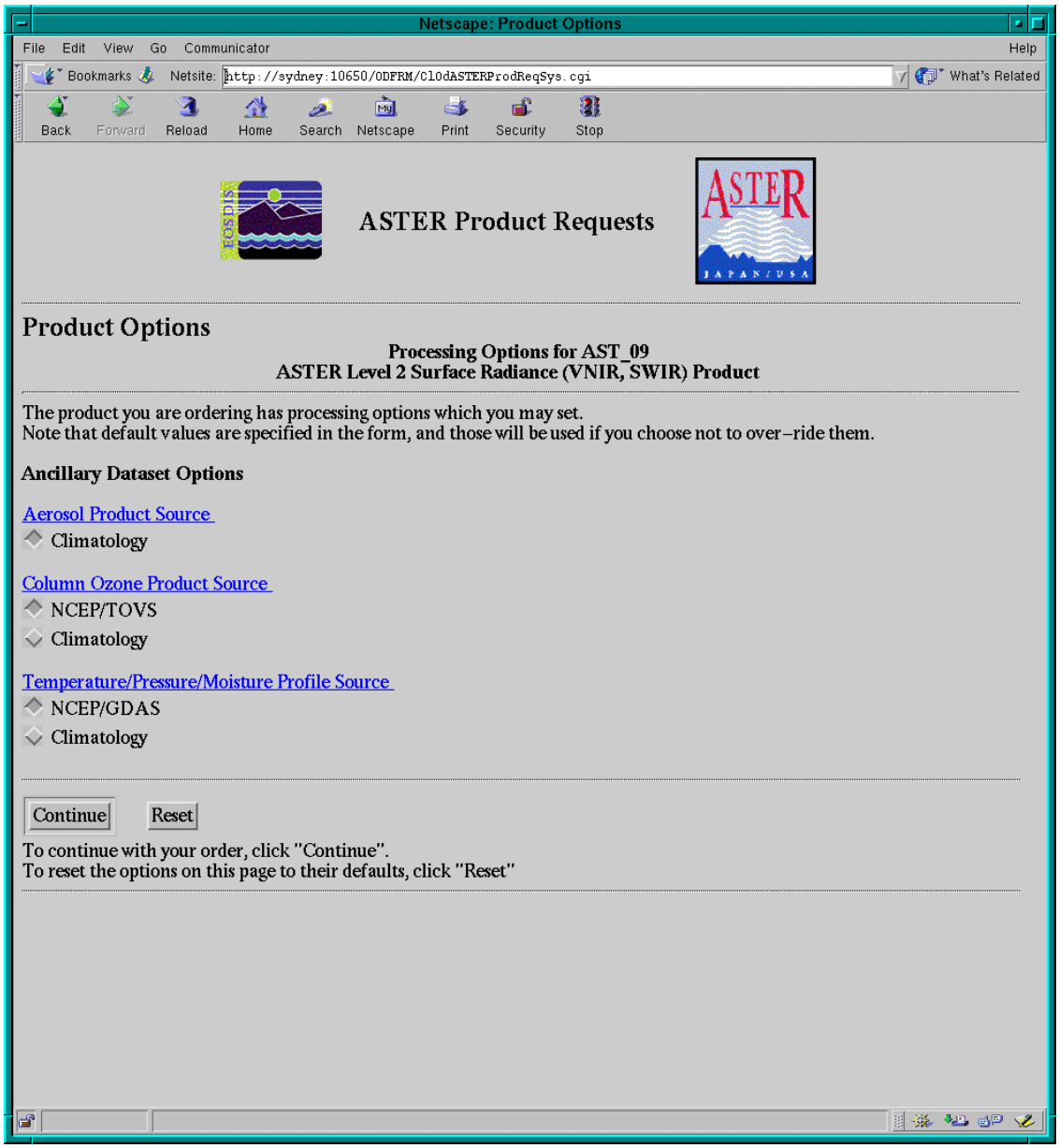

Figure 4.12.6-11. AST_09 Product Request Page

4.12.6.2.10 AST_09T

To order the AST_09T (ASTER Level 2 Surface Radiance (TIR) product), select the **AST_09T** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-12 showing the AST_09T Product Request page. Select the parameters and click on the **Continue** button to order the AST_09T product. This takes you to the Media and Shipping Information page.

Figure 4.12.6-12. AST_09T Product Request Page

4.12.6.2.11 AST14DEM

To order the AST14DEM (ASTER DEM product), select the **AST14DEM** radio button on the Product Request Selection page and click on **Continue**. This brings up Figure 4.12.6-13 showing the AST14DEM Product Request page. Select the parameters and click on the **Continue** button to order the AST14DEM product. This takes you to the Media and Shipping Information page.

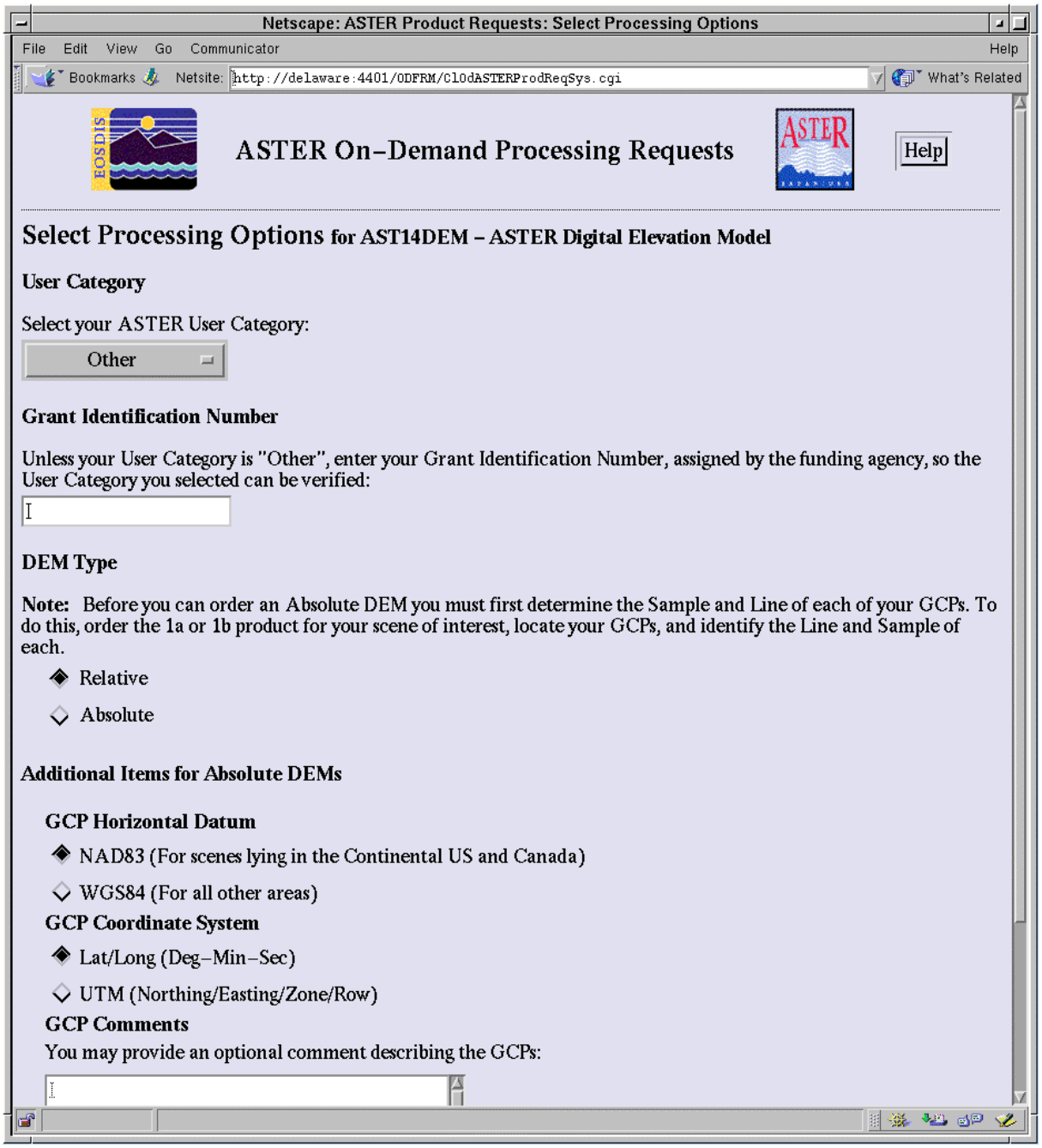

Figure 4.12.6-13. AST14DEM Product Request Page

If the DEM Type selected is **Absolute** and the GCP Coordinate System is **Lat/Long (Deg-Min-Sec)** then the page in Figure 4.12.6-14 is shown.

If the DEM Type selected is **Absolute** and the GCP Coordinate System is **UTM (Northing/Easting/Zone/Row)** then the page in Figure 4.12.6-15 is shown.

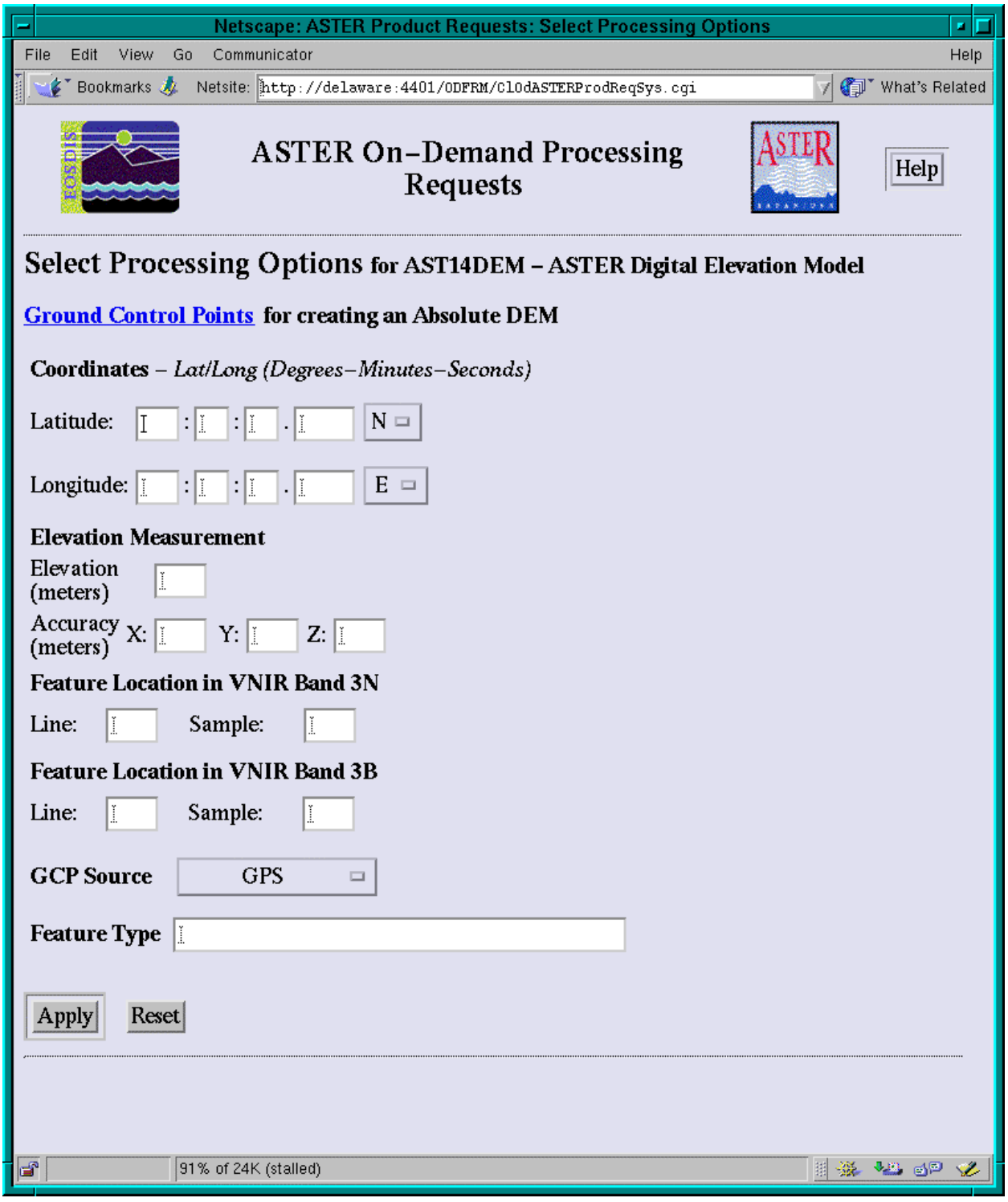

Figure 4.12.6-14. GCP for Absolute DEM (Coordinates Lat/Long- Deg, Min, Sec)

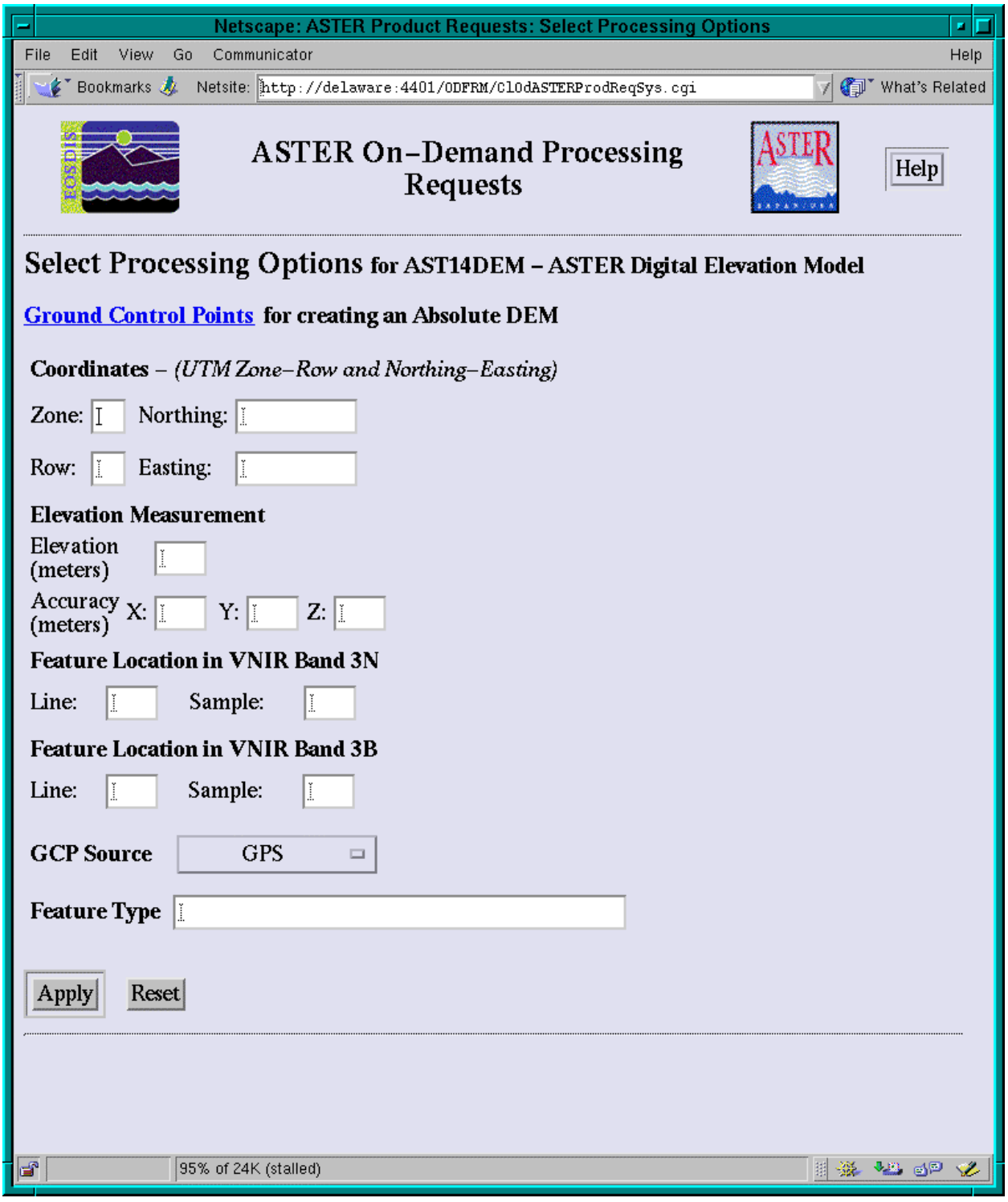

Figure 4.12.6-15. GCP for Absolute DEM (Coordinates UTM Zone-Row, Northing-Easting)

4.12.6.2.12 Media and Shipping Information

After selecting a product for ordering and hitting the **Continue** button on a Product Options page, the Media Options page shown in Figure 4.12.6-16 appears.

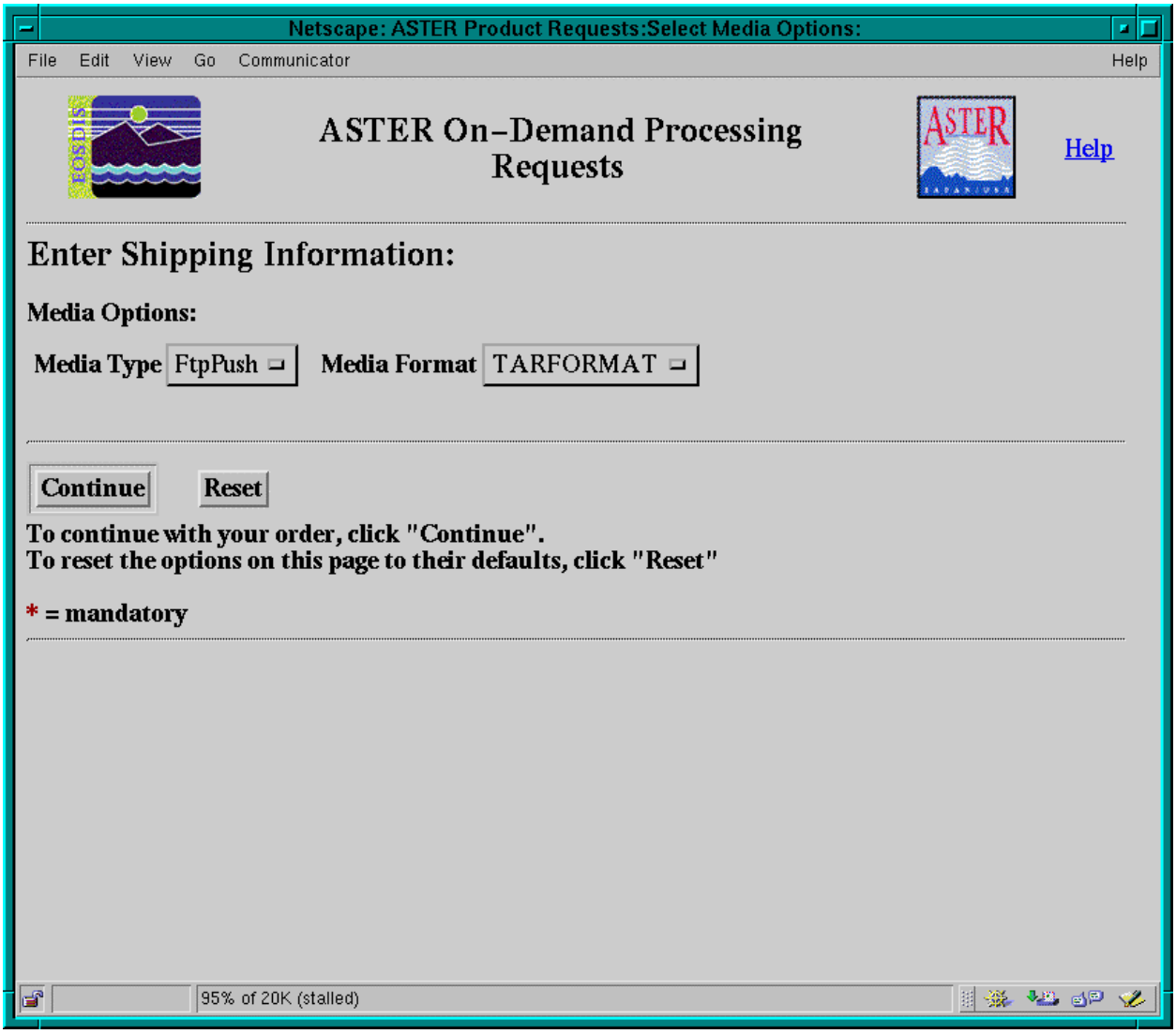

Figure 4.12.6-16. Media Options

The Media Options page requests information on the form of product delivery. After clicking the **Continue** button on the Media Options page,

a) If **FtpPull** was selected, the user is shown a Product Request Confirmation page as shown in Figure 4.12.6-19

b) If **FtpPush** was selected, the user is shown the FtpPush Information page as shown in Figure 4.12.6-17

c) If **8MM** tape was selected, the user is shown the Shipping Information page as shown in Figure 4.12.6-18.

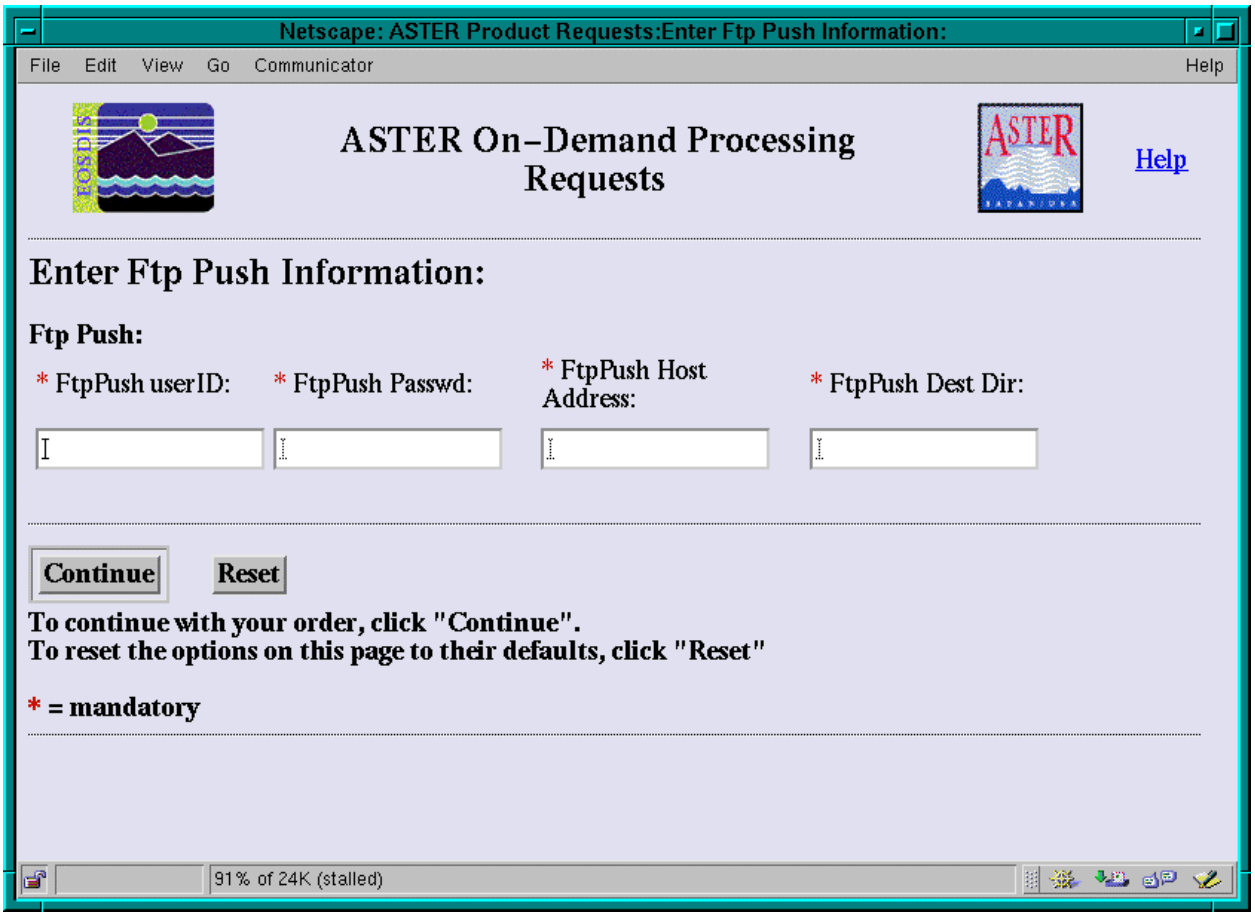

Figure 4.12.6-17. FtpPush Information

After entering the **FtpPush** Address and clicking on the **Continue** button, the Product Confirmation page in Figure 4.12.6-19 is shown.

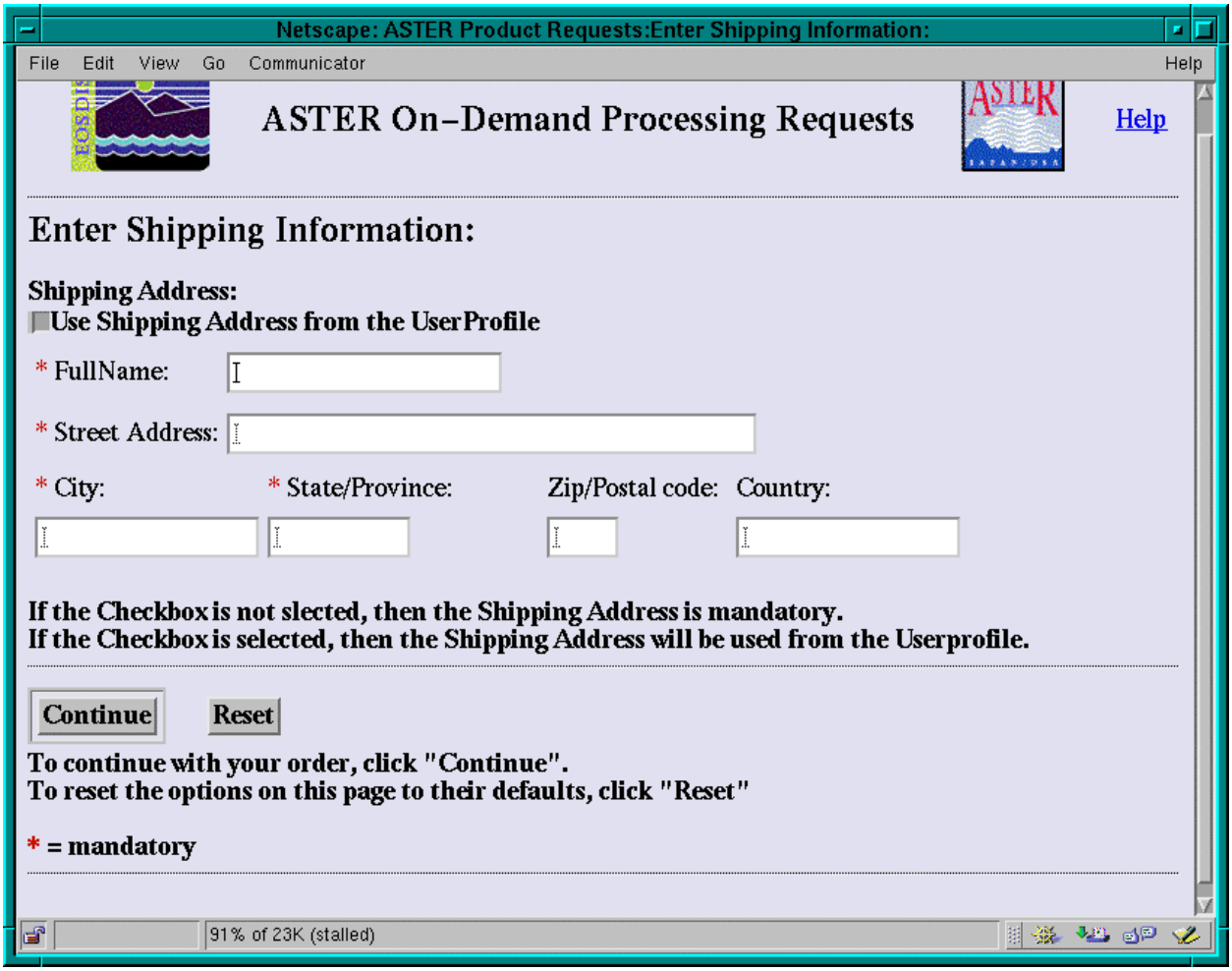

Figure 4.12.6-18. Shipping Information

The **Shipping Address** is specified by hitting the **Use Shipping Address from the User Profile** button or by entering the address information fields. On clicking the **Continue** button, the Product Request Confirmation page shown in Figure 4.12.6-19 Shipping Information.

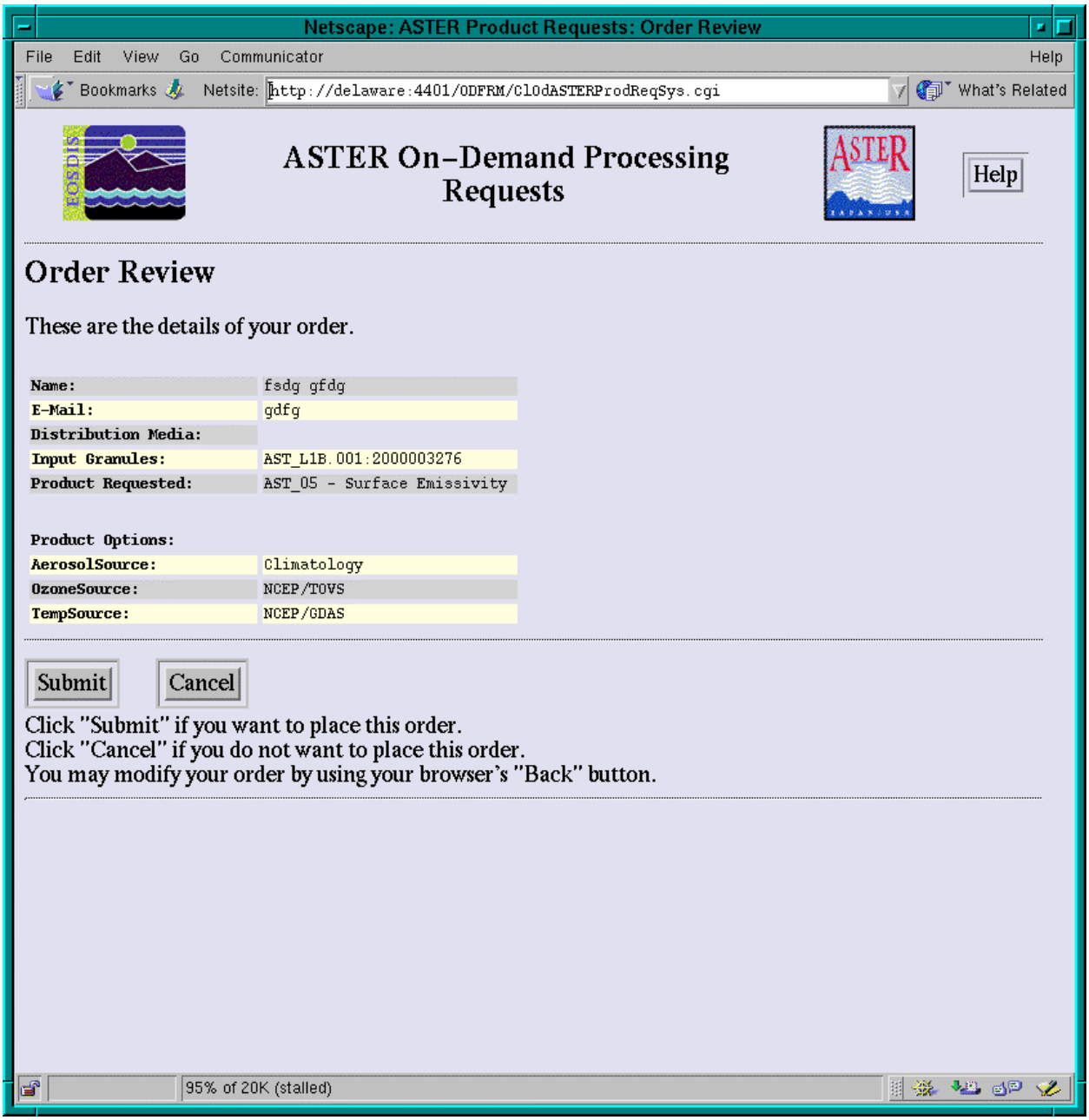

Figure 4.12.6-19. Example: Product Request Confirmation Page

By clicking on the **Submit** button of the Product Request Confirmation page, the request is sent for processing.

4.12.6.3 Required Operating Environment

ODFRM is accessible with an environment supporting a web browser such as Netscape version 4.0 or higher OR Internet Explorer version 4.0 or higher.

4.12.6.4 Databases

None.

4.12.6.5 Special Constraints

None.

4.12.6.6 Outputs

None.

4.12.6.7 Event and Error Messages

None.

4.12.6.8 Reports

None.